FIGURE 1-A

ICAM REGION GENOMIC

3421

```
.>19:10203901-10296400
        cccataatcg cagcactttg ggaggccaag gcgggcagat cgcttgagcc cagaagtttg
61
        agatctgcct gggcaacaYg gcgagaccct gtctctatga aacaagaaaa aagaaagaaa
121
        cqaaatactg ttccatcatt tgccacataa aatctaaact ctctggtgca gaacagactt
181
        qcaaatctqc ctgtaaaatc atacaccgga ttttggagta gacacacagg aggctgattg
241
301
        tagtggtggc ttctgggaga agaactgggg ggtagggggc acagataaga gtagacagaa
361
        ttttcactct agtaatcttt gtaatttttg aaattctctc taccaggtgt atgaatgacc
        aatgaaaata tacaataggo caggogoagt ggotoacgoo tataatooca goactttggg
421
        aggctgaggc gggtggatca catgaggtca ggagtccgag gccagcctga ccaacatggt
481
        gaaaccttgt ctctacgaaa aatacaaaca ttagtcaggt agggagcatc acttgagaac
541
        601
        aaaaaaaaa aattgctggg catggtggaa catgcctgtg gcctcagcta cttaggtggc
661
        tgcagcagag gatcatctga ggccaggaat tcaagactac agtgaactat aatcgttaca
721
781
        ctgcactaca gactggtaac agggtgagat cctgtctcaa aaacaacagc aacaaaataa
        acgattaaaa gaccttttaa agttgcaaaa tacatagagt cttaaacatg catccacagt
841
901
        tatttattta tttatttaga aacggagttt cactettgtt geceaggetg gagtgeaatg
        gtgcggtatc agctcactgc aacctccgcc tcccaagtta aaggaattct gcctcagcct
961
        tccaagtagc tggaattaca ggcatgcgcc accatgctcg gctaattttg tatttttagt
1021
1081
        aaagatgggg ttttggcata ttggccagga tggtttcgaa cccctgacct caggtgatcc
        accegecteg gaeteceaaa gtgetaggat tataggeatg agecaceaeg eeeggeegea
1141
1201
        ttcaqttatt cttqcaqqqa taaaatacac aatgaaatac actatacttt ttgttttctt
1261
        tottictttt ttttttttt ttttgagaca gagtotoact cgtcgcatgg gctggagtgc
1321
        ggtgcgggat ctcggctcac tgcaacctct gcctcctggg ttgaagcgat tctcctgcgt
        cagceteceg agtagetggg attacaggtg ecceccacta egeceageta attitttgt
1381
       atttttagta gagataaggt ttcaccatgt tggccaggct ggtctcgaac tcctgactcg
1441
1501
        tgattcgccc accttggcct cccaaagtgc tgggattaca ggcgtgagcc accgcacccg
        gccacatttt ttttttttt tttttgagac aggatcttag tctgtcaccc aggctggagt
1561
1621
        acagtggcat gaacatggct cactgcagcc tcaatctctt gggttcaggt gatccttctg
        ccttagcctc cccattagct gggaccacag gcatatacca tcacacctag ctaatttta
1681
1741
        aatttttggt agaggccagg cgcggtggct cacgcctgta atcccagcac tttgggaggc
        cgagtcgggt ggatcacctg aggtcgggag ttcgagacca gcctggccaa aatggtgaaa
1801
        ccctgtctct actaaaaata aaaaataaaa ataaaaatta gctgggcgta gtggcgggcg
1861
        cctgtaatcc cagctactcg ggaggctgag gcaggagaat cgcttgaacc caggaggcag
1921
        aggttgcagt gagccaagat cgcgctactg cactccagcc tgggcaacag agtgagattc
1981
        tgtctcaaaa aaaaaataat aataatgcta tttattgact ttacaccttg taccaggcat
2041
        gggaagettt geeteeatta egteaetgaa teteataace teettteea geagaggaaa
2101
        atgaggttgg ttcacagacc acgttgtcag ctgtgctctg tccagaacgc actggcctcc
2161
        aagtagacag ccctggactg gtagggaagc cggctatgat ccggtggcgc cccctggagg
2221
        tctatcggga acatggtaaa gaacctaaaa atgggtgggc cacagtagct catgcctgta
2281
2341
        atcccagcac tttgggggac caatgcggga gaattgcttg agcccaggag ttcaagacca
        gcctgggcaa cattgggaga cccaccccc gccatctcta caaaaaaaaa attaggccgg
2401
        gcgcggtggc tcaggcctgt aatcccagca ctttgggagg ccgaggcggg tggatcacct
2461
        gaggtcagga gttcaagacc agcctggcca acgtggtgcc acactgtctc taataaaaac
2521
        acgaaaatta gggccgggct cggtggctca cgcctgtaat cccagcactt tgggaagccg
2581
2641
        aggcgggcgg atcacgaggt caggagattg agaccatcct ggctaacacg gtgaaacccc
2701
        ctctctacta aaaatacaaa aagttagcca ggtgtggtgg cgggcgcctg tagtcccagc
2761
        tactcggtaa gctgaggcag ggaatcgctt gaacccggga ggccgagatg tgcgatctca
2821
        caccactgca ctccggcctg ggcgacagag cgatactcca tctcaaaata caaatacaaa
        ataaaaaaat acaatacaaa aatgagccgg gcttgcgtac ctgtagacca gctactcagg
2881
2941
        agacagaggc aggagaatcc cttgagctct ggaggtcgag gctgcagtaa gccatgatct
3001
        tgcccattgc actccagcct gggcgacaga ggaagacctt gtctctaaaa accaaaacaa
3061
        agaaactaaa aataagcatt cggatttgtt agggggcgac aagggaggca ctccaggatc
3121
        tqtqqactcc ccactttgtt ctgtccttgg agagccctgg aaggtctgag aggggacggg
3181
        acctggttta agggggtagg ggagaggacc ctggtctagg gggtaaggga cacaaatacc
3241
        taatctgagg ggtttcgggg ggacatggcc ctgccctggg gaatctaaac tgggaggcat
        ggtctggcag gcccaatcct gaaggctttc tgagggcaat aaggccctgc ctttaaacaa
3301
3361
        atqaaaaaac qccaqqcacq qtqqctcacq cctgtaatcc cagcactttg gaaggctgag
        gcgggaggat cacgaggtca ggagatcgag accatcctgg ctaacgcggt gatacccgtc
```

FIGURE 1-B

```
. 3481
        tctactaaaa atacaaaaaa ttagccaggc gtggtggcgg gcgcctgcag tcccagctac
 3541
        tcgggaggct gaggcaggag aatggcgtga acccaggagg cggagcttgc agtgagccga
 3601
        gatcgcgcca ctgcactcca gcctgggcaa cagagcaaga ctccgtctca aaaaaaaacaa
3661
        aaacaaaac aaaacaaaa acaaaaaaac aaataaaaaa acaaaaccac ataactggat
 3721
        aaagaaaaaa ccatctccga cagccttgga ggcgggatga aggcgtggcc cggtgggcgt
3781
        gaccaacage aaaagtttaa gegttattgg etgtatteet tagttgetea etceagaact
 3841
        qcccacttat qggcggqqt cactccttca ggcttaacag tcattggctg aattgggcca
 3901
        gagaggtete attggetgaa tteetgeace ggetegtegg aggegggaee caaagtagge
 3961
        taggectacg gaagetgggt ettettgetg tgaggtegeg ttecceagtg ttacggaggg
 4021
        tccttgaggc aggagtgaaa attgggtctg ggggttagtc ctggggtgga ggtctgggca
 4081
        cgccgggtcg gaccccctcc atcttcggtt ttgcacaccc cgctttccag cgcggagtcg
 4141
        cggcgggtag ggcggcgtcg cgtgcgtgac gtcatccagc ggcgcctcgc gaggctccag
        tggccttgac ctcccgcggc gtgggaggct gcgcggcgat gctgcagttc gtccgggccg
 4201
 4261
        qqqcqcqqqc ctqqcttcqq cctaccqqca qccaqqtgag gccaqgggct ggaggcgtgg
        tcgaaggatg aaatttgggg gtgtccaggg gtcgtctctc actttcgccc aacccttgca
 4321
 4381
        gggcctgagt tccctggcgg aagaggcagc gcgtgcgacc gagaacccgg agcaggtggc
 4441
        gagcgagggt aaggcaaccg gggtggctcc aggaggggcg gcgacagaga ggtctgaccc
 4501
        ttgaccctaa cctctgaccc ccgcaatcgc tccaggtctc ccggagcccg tgctgcgcaa
 4561
        agregagete eeggtaceca eteategacg eecagtgeag geetgggteg agreettgeg
        gggcttcgag caggagegeg tgggcctggc cgacctgcac cccgatgttt tcgccaccgc
 4621
 4681
        gcccaggtga gcgagggctg taatggtgaa ctgagtggca gagggatgaa gagcgggatt
 4741
        tcaggagtca cgatgacttt gggcttgtac ccttgggaaa gtgctgtatt tctacagcct
 4801
        ccgtttctcc acctgtcaaa ggggaatgat gacagtttcc cctgctgtag cgctgtgtga
        gattgaagcc tgagaggtga catcatctaa gggttaggga gacagaattc tggagcccga
 4861
 4921
        ctgattaggt tcaaatcctg ccttcccctc ttgtccctca gtgtccctat tttgtcagcg
 4981
        qtcqqqaqqt tqctqtqatq aataaatqac ttaattctqq cacataataa gttctataga
 5041
        aatgttgata atctttgtta actggttttt gcaaataaga gcactaaaaa gactaaacca
 5101
        ttcctcggtg cctggaagag gctgtttgca ttttagttac cctgctgttc ataacatctc
        taagaaaatg taggggccac cctgggcgca gtggctcacg cctgtaatcc cagcactttg
 5161
 5221
        ggaggccaag gcgggcggat cacgaggtca ggagatcgag accatcctgg ctaacatggt
 5281
        qaaaccccqt ctctactaaa aatacaaaaa aaaattaqcc qqqcqtqqtq gcqqqcqtct
        gtagtcccag gtactctgga ggctgaggca agagaatggc gtgaacccgg gaggcggagc
 5341
 5401
        ttgcaqtqaq ccqaqatcqc gccactgcac tccatcctgg gcaacactct gtctcaaaaa
 5461
        aaaaaaaaa aaaqaaaqaa aagaaaatgt aggggccagt tactgtggct cacatctgta
 5521
        atcccagcac attgggaggc cgaggtgggc ggatcacttg aaaccaggag ttgcagacca
 5581
        qcctqqccaa catqatqaaa ccccgtctct accaaaaata caaaaattag ccggacgtct
5641
        tagtgcaagc ctgtagtccc agctactcag gaggctgagg catgagaatc gcttgcacct
 5701
        qqqqaqatqq aqqttqcaqt qaqccqtqat tatactactg cactccagcc tgggcgacag
        agacagactc catctcaaaa aaaaaaacag gtgaaattga tttcaataat gtatttaacc
 5761
 5821
        tgtatttaaa actatgtcga aatcacattg tagcatgggg cactggccat gtttcagatg
5881
        ttgagtatgt gactgtatgg aatggtatag aactagagag gaaaaccagt ccctgaagaa
 5941
        ggtggcaata agtgaagtgt aatagcagga aaaaagtaat ggtaggaaaa acaaggaaga
        aggggtggct tttttttct gagatgaagt ttcgctcttg tcgcccaggc tggagtgcaa
 6001
        tggcatgctc tcagctcact tcaacctccg cctcctgggt tctactaatt ctcatgcctc
 6061
 6121
        agcctcccga gtagccagaa tgacagacat gtaccaccgt gcccagctaa tctttgtata
 6181
        ttttggagag acatcacttt gccatgttgc ccaggctggt cttactcctt gcctcaagtg
        atccacctgc cttggcctcc caaagtgcca ggattccagg catgagccac tgcacctggt
 6241
 6301
        cagggtggct ctttctttag aaggtacctt tcagcagtta ttggagctgc tacctgtagg
 6361
        ctgagaaaga accatccagg agaagagtgt ttcaggcaga gggaacagca agtgccaagg
 6421
        ccctgaggca gaatttcaag atggggtcag tgaggggcag aggcaaatcg cccagggccc
        tggaggcaga agggagaatc ctgggttttc ctatagtggg gtgggagcgt ttgaagcaga
 6481
 6541
        gttgggcttc tcatgtgtcc ttcctccccg caggctggac atactgcacc aggttgctat
 6601
        gtggcagaag aacttcaaga gaattgtgag tgcctaaatg gagcaaggtg gtgggaagga
        gcttcctggg gaggttgggg ataggaccca gaggaagccc atcgctgggt tttctctgga
6661
 6721
        ctgctcqqct qqqqcctcat ctgtctcctg aactattcac cgatgggtcc atttttggtt
        ctctttttt tgtttgtttt tgagatggag atggagtctc actctgtcac ccaggctgga
 6781
 6841
        gtgcagtggc gcaatcttgg ttcactgcaa cctccgcttc ctgggttcaa gcgattctcc
        tgcctctgcc tcctgagtag ctgggattac aggtgtgcac caccatgcag gctaattttt
6901
 6961
        gtatttttag tagagatgga gtttcaccat gttggtcagg ctggtctcaa actcctgacc
 7021
        tcaaggaacc tacctgcctt ggcctcccaa agtgctggga ttacaggcgt gagccaccgt
        gcccagctca ttttcagttg ttttctgatc actcactgat gtgggcattg tggtgggtga
7081
 7141
        qaqqatataq caqqqaccac qaqqacaaaa caggcaaggt ccggctgtgt gcaagtggct
        caggcctgta atcccagcac tggaagctga ggtgggtggg ttgcttgggg ccaggaaaga
7201
```

FIGURE 1-C

```
ccagectggg aaacagcaag acccagtete tacceettee eccaeaacce caagaaaaag
7261
7321
       atgggcaaag tecetatiet aatgaaggte acagtgteat gggaggagaa gtgaaggtga
       gtcagatggt catacgtaat gtgtaattat gagcatgtcc cagagaatgg gacgttcaac
7381
7441
       cttgggtcta ctgtagaagc taaccagatc aaggaggcag tgggggctagt gtggagataa
7501
       caggaacagg gtgtgcaaag gccctgtggc agggaccaca aggaagccag tgttgccaca
       gaggccagtg ggagcagtgg ggaggagtct gggttttgtg ccaagaacat tgaagaatcc
7561
7621
       attaccagte agggtettat ccatecace cagaggtetg gecagteete eccetgetea
7681
       caccttccct ggctccccat caccctagga ataaagtcat cagtctgcta ttctgagttc
7741
       ttoctgattt cottgecetg etectetic etgattetee etgtetgtgt cattteceat
       ggccctccct ccttgtggct acaaccacat taaaattgtt caaaaaatag gccggcacgg
7801
7861
       tggctcacac ctgtaatctc agcactttgg gaggccaagg caggtggatc acttgaggcc
7921
       aggagttcca aaccagccta gtcaacgtgg caaaacccca tctctactga aaatacaaaa
       aattagctgg ggccaggtgc ggtggctcac acctgtaatc ccagtacttt gggaggccga
7981
8041
       qqcqqatqqa tcacqaqqtc qggagatcga gaccagcctg accaatatgg tgaaacccca
8101
       tctctactaa aaatacaaat attagttggg tgtggcagcg ggcgcctgta gtcccagcta
8161
       ctctggaggc tgagacagga gaattgcttg aacctgggag gcggaggttg cagtgagccg
8221
       agategegee actgeactee agegtgggeg acagagegag actecatete aaaaaaaaaa
       attagccggg catggtgaca ggcacccgta atctcagcta ctagggaggc tgaggcagga
8281
8341
       quatcoctty autotaggaa toagaggtty cagtgagcca aggtcacacc acttgcactc
8401
       cacagcctgg gtgacagagt gagactgcct caaaaaaaaa aatcaatagt tcagaaaata
8461
       ccgagcaccc cctgcgtgcc cggtggcagg gcccctgcct ttgtgaggct ggcatggggc
8521
       aggagetgtg acttetttae cetececete getececaag tactetgtge ttggccagag
8581
       agagecegte ateatggtge etectgtetg actteceegt ggeaggactg atetgeeegg
       ctccctgaca cctgcctcgt ggacctgacc cccctcctct ttgtgcctcc agagctatgc
8641
8701
       caagaccaag acgagagccg aggtgcgggg cggtggccgg aagccttggc cgcagaaagg
8761
       cactgggcgg gcccggcatg gcagcatccg ctctccgctc tggcgaggag gtaacaggac
       agggtggagg gggcggggag gggtgggggg gccagggaag ggcctgggtg tttactcaca
8821
8881
       cacagetgeg cacatetgge atggtattat gteageeetg tteeeteeac eteatggaac
       cacctgggct ggtgacatcg gaactgaggc ccttggacct cactacccat ataaggggac
8941
9001
       agagatetgg gagecateca etectecete tegeatgece tgtetettea geetgtggee
9061
       acagecete ttgaceceae etectgteae ecteteetga eccacaette ceacageace
       cagagagete ttetaaateg tggaacetga acteeggace teggeetttg tgtggaacet
9121
9181
       gaactcctga cettgtcatt gtgggccctg gtggctgcac acetttcccc ctcatcccct
       cetttecete tetgaccagg cagagatgae tetetettgt ttttteggtt gtgtttgttt
9241
9301
       ttaacttttt attttcttga atgctaacaa gatgactcag ggtggtgcca gccacccat
9361
       cacctgttta cctggccage tetecteace tttcagggtt ctgggccaca cctcctccag
9421
       gaageceee ttgateteet tteetteeae ateeceegga getaceetga tttettetae
9481
       agctgagect cttttetgee etgeeggaat gtgaatggea tgagggeagg gaccatgtet
       gttgtcttct ctgctgcatt tccaaggccc aggcgagggc agacaccaac acatggtgct
9541
9601
       tgcaggggtc tccctgactg ttgttgctcc cagatcatac tgcttgctcc accggagcat
9661
       gtgcctgatg cetteetete eegettgace tgaaagtteg aaceteetga taactteage
       attaacagcg tgcttgagtt aagttcacac tctagccact ctatggaatc cacaccataa
9721
9781
       ctcatqqtqt cctatqgqqc aggaactqtc cgatctcaag gtggtttgtt ttttttattg
       tttgcttttg agacaagatc tcgctctgtt gcccaggctg tagtgcagtg gtgcaatcat
9841
9901
       ageteactge ageettgage teetgggete aagtgateet eeateeteag eeteecaaaa
       tgctggtgtg agccaccttc gccagccctg tctcagagtg tgacagctgg gaaaactgaa
9961
       gcccagtgaa gcaaagtcac tggtcccatg ttgtccctga tccagcctcc cctgaggccc
10021
       caccetetet gcettgttee tggcagegee eceteteteg teaccecatg ceagecactg
10081
10141
       cagcagattg ctgacctcca ggctctgcag tggcccctac ctgctcacat gcctctgtcc
       ccgcaggagg tgttgcccat ggcccccggg gccccacaag ttactactac atgctgccca
10201
       tgaaggtgcg ggcgctgggt ctcaaagtgg cactgaccgt caagctggcc caggtacagc
10261
10321
       catggggggg cccagacagc tgctagaggt ggggctgctc tggacccagg gttcaaacca
       teettteett ceaceaggae gaeetgeaca teatggaete eetagagetg eecaceggag
10381
10441
       acccacagta cctgacagag ctggcgcact accgccgctg gggggactcc gtactcctcg
10501
       tggacttgtg agggcacagg gcagagcagg ggcagggggc cctgagctcc gtactctgag
10561
       ggttcaaccc ccactccctg gcctctctta cagaacacac gaggagatgc cacagagcat
10621
       cgtggaggcc acctctaggc ttaagacctt caacttgatc ccggctgttg gtgagcaaag
       agoccaggoo cotagagtgo goatgtgoag gotocgotgt tagaatcaca goggttoaaa
10681
10741
       tccggcatct ggtcgctgag tggcctcagg cagtgaccac gctcccggac ccaaccttca
       gcttgcccaa agcaataatc tttcctaaag aagtgcttgg ctggggatgg tggctcacgc
10801
       ttgtaatccc agtactttgg gaggccaagg cagtctgggc aatatagtga ggctcccatc
10861
10921
       tqtactaaaa ataaaaaaqt taqqcqtqqc gatgtgcacc tgtagtccca gctactcggg
10981
       ggctgagcca ggcggatagc ttgagctcag ggggccaagg ctgcagtgag tcatgatcgc
```

FIGURE 1-D

```
11041
11101
       aaaaaaaaa gctccaaagt cacctctgtc aaagccacag tctgttcctt ccacagccac
11161
       aagatggcga catgagccta agtcaagtcc tgtccctcaa cccacgcccc tcgctggctt
11221
       ccccacctct ctcaggatga aagcccaagt catcagggtg gcacgtcagg ccctgcacga
11281
       tgtgccccgt cacctccctg ccctcccgtc atttgccctg ggtctccccc accagaatgg
       gagccaggag tcccagccag gcacaggacc gagcctggct ctcggtcagc aggtgatgag
11341
11401
       ctgggagcag ctccttggcc agaggcttac aggcaacaag cggccaggca gggtctggcc
       ccgggctgct gggctcacaa agtcacacta gaccacagtg acgatetetg taagcacaaa
11461
11521
       gggactccga tgtgggtggg gtgaggagag aggcagcccc ggcctgaccg gcccccgcc
       ccgccccac cccgcccca ggcctaaatg tgcacagcat gctcaagcac cagacgctgg
11581
11641
       tectgaeget geecaeegte geetteetgg aggaeaaget getetggeag gaeteaegtt
       acagaccet ctaccette agectgeet acagegactt ecceegace etaccecacg
11701
11761
       ctacccaggg cccagcggcc accccgtacc actgttgaWg tgaagcacct cttctgagcc
11821
       aggccqagcc cctggccgac ttgggagcct Yaggcccacg cccacccttc gaggaaggtg
       tcacctggac cccttcattc cacggaggaa gctgaggcca cagggagcgg ccatcgccat
11881
11941
       tgggaagggg cgactccacg gaRagcccag acgggcttct gcatccattc cctctttttg
12001
       tttttaaaat aaattgtatt tttgaatcaa qqaqqataaa qataacttct cagtgtcatt
       tttgataatt gcattgagaa cgatgagctc cttcccaggt tctgggcact gttggggatc
12061
12121
       cgccgtctca agaggctcac ggtctggttt aggggaaccc cagggctgtt tgtggaaatt
12181
       acaagaattc acttacccqq tqaqtcaqac tccaqqagct cacaggtgcg tgggcgctgg
12241
       cacttectag gagetgacte etgecacate ceteteetga geactgetge cagecattet
12301
       cacccctgag agggtttgca gtcctgtctg cgacagtact tcatgcagcc tgagagtgtg
       tgcttgattg tacaagtaga tgttgtgtaa acctgagttt tcagagtgac ttcctgtaag
12361
12421
       cacagtcaga aaagtaaatg tctctctgta agtgagcaga taagcacatg cttaaaaaca
       ccagctgggc gtggtgactc gcacctgtaa ccctagcact ttgggaggtc aaggtggaag
12481
12541
       qatcqtttga gctcagagct tccagaccag cctgggcaac atggtgaaac cccatctctg
12601
       caaaaaatat aaaaattaag tgggcgtgtt ggcgtccacc tgtggtccca gctacttggg
12661
       aggctgaggt gggaggatca cctgagccca ggaagcagag gttgcagtga gctgagactg
       agccaccaca caccagectg ggtgacagag tgagacactg tettaaaacc ccaatatecc
12721
12781
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12841
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14761
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FIGURE 1-E

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FIGURE 1-F

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FIGURE 1-G

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25801
       tggtggtgct tgcctgtaat cccagatact ctggaggctg aggcaggaga atcacttgaa
25861
25921
        cccgggaggc aaaggttgca gtgagctgag attgcgccac tgcactccag tctgagtgac
       aaagcgagac tccatctcaa aaaaaaaaaa aataaaagaa cacatcttta gcatggcctt
25981
26041
        cagtgeteae gggatettee tgaattaate teeceetett cateettget caeteagete
       cagccaccct gccccgggac atctgtactt gcctggaact tatttccctt ttctccggac
26101
```

FIGURE 1-H

```
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26221
26281
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26341
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       gtgattcttg tgcctcagcc tcccaaatag ctaggactac aggcacgtcc caccatgccc
26401
26461
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26521
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       tgagccacca caccoggcct gctcatgaat tttctcttta acttccacat cgaaggcaaa
26581
26641
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26701
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26761
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26821
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26881
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26941
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27241
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27481
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27541
       ttcagacact ttaataaaag atgcaaatta agccaagtgt ggtggcttgt acctataatc
27601
       ccaactactc cagaggctga ggcagaagga tggtttgagc ccaggagttt gagaccagcc
27661
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27721
       ctcactctgt cgcccaggct ggagtgcagt ggtgtgatct cggctcactg caagctccgc
27781
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       gggattacag gtgtaagcca ctgtgcccat ccaagaccct gtttctaccg gaaaaaaaaa
27961
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28021
28081
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28141
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28201
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28501
       28561
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29041
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       tagctggcta tgagaagaga ggctgggagg ctgtgggaga gggcttgggt gtggagaatt
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29341
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29401
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29461
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       gacettgtga tetgecegee teggeeteee aaagtgetgg gattacagge gtgagecact
29701
29761
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29821
       aagagttatc aaggccaaaa taaggaattc aaatgaaaac aaaacaaaat caaagaagaa
29881
       aaaacagaag agcactgggc aggctaggca cgtggctcat gcctataatc ccagtgattt
```

FIGURE 1-I

```
29941
       agaaggccga agtagaagga tcgcttggag gccaggagtt ggacaccagc ctgggcaaca
30001
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30061
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30121
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30181
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30241
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30301
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30361
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30481
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30541
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30601
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       qqattacagg cacctggcac cacgcctggc taatttttgt atttttagta gagacagggt
30661
30721
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30781
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30841
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30901
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30961
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31021
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31081
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31141
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31261
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31441
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31501
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31561
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31621
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       31861
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31921
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33061
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33121
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33181
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33241
       accacgccat gccgaagccc agcttgtttt taattttttt ttttttttt ggagaaatga
33301
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33361
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33421
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33481
       acaaacaacc atgactacaa tctaatttta aaatatttca atcactctaa aaaagaaacc
33541
       tcctgcttat qtacagcgac tctgtctacc tcttaagtga attctcctac ctttaatagc
33601
       cctattttac agttcaggaa actgaggttc agagagacaa agtcacttac ccacagcaaa
33661
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```

FIGURE 1-J

```
33721
       tttttttcct ctgagagaga ctctcactct gtcactcagt ctagagtaca gtggcgcgat
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33841
       tcagcctctc aagtagctgg gactacaggc acacaacacc acgcctggct aatttttgta
33901
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33961
       aggitgatecg cetgeetegg cececeaaag tgttgggatt acaggegtga gecaceaeac
34021
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34081
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34741
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35041
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36481
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36601
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36661
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36721
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36841
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36961
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37021
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37141
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       aagaaataca gactacaaca ggcccaaaaa gggaccccca tgaaaccgaa cacacaagcc
37201
37261
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37321
37381
       gggacgccgg aggacagggc attgtcctca gtcagataca acagcatttg gggccatggt
37441
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FIGURE 1-K

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37501
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37621
       tgctgcctat tgggtatgct gaggYcccac agacttacag aagaagtggc cctccataga
37681
       catgtgtagc atcaaaacac aaaggcccac acttcctgac ggatgccagc ttgggcactg
37741
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37801
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37861
37921
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37981
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       tcagagatta cccagtgagg ccttattcct cccttccccc caaaactgac acctttgtta
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       atttcactgg gagettgcac tatgcagete cagtttcctg cagtgatcag ggtcctgcaa
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       tcagcctcct gagtagctgg gaccataggc tcacaacacc acacctggca aatttgattt
38461
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38521
38581
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38701
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38761
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38881
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38941
39001
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       agegegetgg gacgeeggae taagegggeg caaageecca agggtageee tetegegeee
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39121
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39241
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39301
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39541
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39661
39721
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39841
39901
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40861
40921
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       catattgagg gacgtggata cgcagaagag gtatccatgt ggtggcagcc gggaaggggt
40981
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41041
41101
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41161
       ggagtcaaaa gcatcaccct cggtcccttg ttctcgcgtg gatgtcaggg ccYccaccca
       ccgagcagaa ggcggactca ggggcgctcc agggtggctc gagctcacac acgctgagta
41221
```

FIGURE 1-L

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41341
41401
       gcccctccg tcgcgtgcSq gagctgaccc ggaggggtgc ttagaggtat ggctccgcgg
       ggtcaaaagg agaaggatca gtgagagagg catccccaca ccctccccta gaactgtcct
41461
41521
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       gcgctggtgg gaggagctaa atgtgggggc ggRgctcgga gtccagctta ttatcatqqc
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41641
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       agtcgcggcc ggggatgacg cgagagagcg tggtcgcccc cagaaggccc tgggccatca
41701
       tgccggcctc cacgtagacc ccaggggtcg ctcactcctg ccagctcgcc ttcaccaagg
41761
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41821
41881
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41941
       cccaccegec gegeegegg gageegteet etageceage teeteggete gegeteteet
42001
       cgcctcctgt gctttccccg ccgcggcgat gccagggcct tcgccagggc tgcgccgggc
42061
       gctactcggc ctctgggctg ctctgggcct ggggctcttc ggcctctcag gtaagagccc
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42241
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42301
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42361
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42421
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42541
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42661
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42841
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42961
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43081
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43141
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43201
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43381
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43681
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       acggactggg actgtttgaa aacagctcgg cccccagaga gctccgaacc ttctgtgagt
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43801
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43861
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43981
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44041
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       gtcctgatgt caccctcgaa ggggacgcat tcgtggccac tgccacagcc acagctagcg
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44281
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44521
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       aatgeteege ceceaggett eeeggeacea eteetgacee tgagegaace eagegtetee
44581
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44641
44701
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       gacgacagac gcagcttett etgegacgee accetegatg tggacgggga gaccetgate
44761
44821
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       ccttctggtg acttccaagg acccgcctgc tccctcaccg tgtcgtggag gcggagccat
44881
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44941
45001
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FIGURE 1-M

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45061
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45121
45181
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45301
45361
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45541
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45601
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45661
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45721
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45781
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        ctgtgggaca accccggctg gacttcctgg cccccgtgtg agcccctgca atcctgtttc
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46021
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46621
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46861
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47941
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48001
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48241
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48301
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48361
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48421
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48481
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48541
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48661
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48721
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48781
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FIGURE 1-N

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 48961
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 49021
        gcgtgtaatc ccaggacttt ggaaggccga ggcggccaga tcacgaggtc gaggtcatga
. 49081
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        49621
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        ttgaggtcag gagttcgaga ccaccctggc caacgtggtg aaacaccttc tctaccaaaa
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        atacaaaaaa attaaggccg ggtgaagtgg ctcacgtctg taatcccagc actttgcgag
 49801
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        ccccgtcact actaaaaaca caaaaattag ccgggcgtgg tggcacatgc ctgtagtccc
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 50521
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 51661
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 51781
 51841
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        ctgtgtccac ccacagtgct tcagtttacc cccaccctgc ctttccactc agcccatcat
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 51961
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        cctcatcccc aacagcataa ggcacagcag ctgggcctcc tccccacagc ctcctcctct
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 52081
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 52201
 52261
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        cctactgacc tcaaggtctc tttcagagcc ttcagatgag atatttattt tagtaggttg
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 52381
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        acgcctgtaa tcccagcact ttgggaggcc gaggtgggca gatcacgagg tcaggagttc
 52441
 52501
        aagaccagcc tggctaacat ggtgaaaccc tgtctctact aacaatacaa aaaaaattag
 52561
        coggacatgg tggcacaccc ctgtagtctc agctacttgg gaggctgagg caggagaact
```

FIGURE 1-0

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52681
       52741
       52801
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52981
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53041
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56281
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FIGURE 1-P

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60061
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FIGURE 1-Q

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60181
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       aattgcatgg cctctgatcc ctagatgacc ccaagtgtct ctgggcacca gaacctcttt
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61441
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62881
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63121
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63181
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63241
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63301
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63361
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       tgcccaggct ggagtgcagt ggcacgatct cggctcactg caagctctgc ctcccgggtt
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63481
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63541
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63601
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63661
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63721
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63781
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       cacctggcta attititt tittittt tigaggtgga gittcgctct cittgcccag
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63901
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FIGURE 1-R

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63961
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64081
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FIGURE 1-S

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FIGURE 1-T

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FIGURE 1-U

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FIGURE 1-V

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FIGURE 1-W

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FIGURE 1-X

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90001
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       tacagagtaa gagacgccat ctcaaaaaaa aaaaaaagct tgttggggcc gggcgcagtg
90061
       gcccatgcct gtaatcccag cactttggga ggctgaggtg ggcggatcgc ctgaggtcag
90121
       gagttcaaga ccagactggc caacatggtg aaatgccatc tcaactaaaa atacaaaatt
90181
90241
       tgctqqqtqt qqtqqcqtqc atgtqtaatc tcagccactc gggaggctga ggcaggagaa
90301
        tcacttgaac ccaggaggcg aaggttgcag tgagccgaca tcgtgccact gcactccagc
       90361
```

FIGURE 1-Y

90421	agttaattga	tttcacaact	gctgccttgg	catgagattg	agatgcgtct	ctatatctct
90481	gtctctgtct	ctgtgtctct	gtctctgtct	atctttgtat	ctcacacaca	aatgtccagg
90541	tctgagctct	gggtcagaac	tgtggtccat	tctttgcaaa	ctgagggtcc	ccactctcct
90601	gagccattgg	ccacttgccc	acaccactac	ccaagaccag	tcccacctcc	ggacacgtcg
90661	actcactgta	cacggtgatg	ttagaggagc	ctgttatctg	Rgagccattg	cagtacactg
90721	agcagaggat	ccgactgttg	ccagtcacgt	tgctgagatt	gaaggctgcc	cagcccatgc
90781	cactggccac	cagctccttt	gatagggacg	tctccaaggc	gattttctca	gagctgggac
90841		gcagttcaca				
90901	ccacccgcaa	aaggaactcc	tgcccctgga	caccttcagg	aacatgaaga	agtcctggtg
90961	tttgtttcct	tgtYccccaa	cccacgcatc	aacaggcccc	accatttaac	acctctctcc
91021	ttgtgccgag	acagaagggt	tcctgccttc	atggtccagK	gggaaaggta	gaatccatca
91081		agaactcaga				
91141	gagtcaggga	aggetteetg	gaagcgggga	ccattgcagc	ccgaaactga	aggctaagta
91201	ggagttagca	agtgaaaggg	acaggtgatc	ctggcagagg	gaagcacata	cgcaaagggc
91261	aaatttcagg	agttcagatg	gagcaggaag	catgaggggt	gtgtgtgtgt	gtgttagggg
91321		cgtacaagcc				
91381		tcccgaggat				
91441	cagcgttgcg	ttctattcct	ctaccctcta	ctgatcccca	aaacgcagcc	ctctccagcc
91501	ctccccggct	tgactggtct	cacctggggt	cagcagacag	cagaccagca	gagtccagca
91561	ggccctgggc	cacaacacgg	atggtaccat	ggtRgccatt	ctgacagagg	aaggtgcctt
91621	cctgaggtgc	ccgaagggca	ggcaggggaa	aaggcggggc	ctcccactgc	gacggaagca
91681	cagcggttaa	gattgcagaa	gtctggggac	tgcaccttgc	ccaggcctgt	gggtggaagg
91741	ggatgctgtg	gcccttgggg	gccagggtgg	gggacccaga	cggggctctg	caaagtggcc
91801	agcactgctg	agtctcccc	agggaatggg	ctggtcccag	ttgcactgct	ggcccccatt
91861	tgaattcaca	ggaaatgcta	actaaactgg	tttcttttgt	tctcagcact	gggaagcctg
91921	ggtgggggg	atgaggcatc	tccttctggc	tgaacttagg	tgggtagggg	aatattctgt
91981	ccccagagag	gaagttaatg	gggaaaactg	taggcaccat	tgtgtagatg	ttaaggtggg
92041	atttcgagga	aacattaaaa	aacaaaaaca	aaaacagaaa	cagaagcaga	gtcttgctat
92101	gttgccccga	ctggtcttga	actcctggcc	ttaagatggc	ctcctctcat	cttgacctcc
92161	caaagtgttg	cgattacagg	cgtgagccac	cacgcctggc	cacctttgaa	gatcttgagg
92221	atacctccct	atctttgaag	atcttgggga	tcccccatcc	cctgcacaaa	gagctaaggt
92281		gggacagctg				
92341	ttgtttgttt	gttttgagac	agagtctcac	tctgtcaccc	aggYtggagt	gcagtggcgg
92401		cactgcagcc				
92461	ccgagtagct	gggattacag	gcatgtgcca	ccacgcccgg		

FIGURE 2-A

>4:87306501-87383000

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61 .		gcattgaata	-			
121	-	ctaaaattct	-	_	-	-
181	_	Ragattccta	_	_		-
241	, ,	tcacaattct				
301 .		tttaaaacta				
361		atagtaggac	-,•			
421		tcgtctctgt			_	_
481	-	aaaaaaaatg		-		
541	_	aacatttgca		• •	_	
601		ttctgattca	-	-		
661		ctactattct				
721		cccacccaat		-		-
721 781	-	tgaactttaa				
841	_	agtcgaaaat	•	-	• •	•
901		ataatatgtt	-	-		
961	•	aagctaaaga		_	-	-
1021		ctgctgttgt			-	
1021	_	atctcaagtt	-		_	_
1141		tccagtggct	-			
1201	-	aggaggagaa				
1261		agccattttt		-	_	
1321		attccaaaat	-	-	-	-
1321	-	tggaggtctt				
1441		tggtgaacaa				
1501	-	acctgattgt		-		
1561		attattagat				
1621		caaattttta				
1621		tcaagccctg				
1741		acagtgataa				_
1801		gcaaagtgct				
1861		tgctattatc	-		-	
1921	-	aatgtgtttc				_
1981	-	tactttatgt		-	-	-
2041	_	attagcaaac	_			
2101		ggagtgagca				
2161	-	gagaacaata	_		_	
2221		ccccagagaa				
2281		agcccaaaga				
2341		aagaacccag				-
2401		aatgcagaag				
2461		agctcttcac				
2521		gtgcgcatgg				
2581		agctggctgc				
2641		gagttaggcc				
2701		atgaaccttg				
2761		atctccctcc				
2821		gacttttttg				
2881		tcccacccca				
2941		cgtgccacca				
3001		agtgcactgc				
3061		tatgagtcca				
3121	gagagggctc	agtagcctcc	tactgtggga	caggatcaca	ctgagggtga	catatgctgg
3181		aaagaaacac				
3241		atctctgtga				
3301		aaagcacata				
3361	taatgtcatc	tttgattatt	attaaataga	tagatttgca	ttagagggct	ggaaggagag
3421	gggctgtgag	gagatggaca	gagcattagg	agcctgttag	ttttcactaa	caagaaaagg
3481		ggtaaaaaaa				
3541		agagagtgcc				

FIGURE 2-B

```
atgagetgag agaggeeata agageeaggt gacatagggg attgaeagge tgatttteag
3601
3661
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       aagtatgttc acatgaataa ggaagactgt agcctaaatg aggaaaaaag aatatgattt
3721
3781
       Rtaaagaagc aattatgcta aaacctaatt atatcaatgt gcatcttctc ataaaatgat
       caaagtagga gtagctcctc tagtgttctc agtcccagtt tcaggctgtg tgatitggac
3841
3901
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       cttaatatgt ttcctatcca ttcatcaatt atcagacaaa aagataacgt actttcagaa
3961
4021
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4081
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       taatggagag tgacaggaga tttaaagaaa aatatagggt cattatctta aaaggttact
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4201
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       ccatgatgat aaattagcat ttcacactgg gaagcttata ttttgaggca aggggtcaca
4261
4321
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4441
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4621
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4681
       4741
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4861
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       5041
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5521
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6241
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       aaagaaaaac ctagacccaa gctctgtggc ctctatccaa gactaatatc cttcgtgtgc
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6661
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       tgaagtatta ttttttaaaa ttctagttgc ttacaaagag aaggaagatt aatttttaag
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6961
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       tgctcagaat aggagaaatt aaaaagtcag ccgaggccaa gatacatctt aaataaagat
7021
7081
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       ggagaaaaca gtctctgttt ttaaaaacgt tactgcgaat tctacaatta tccaaaagct
7141
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7201
       aacttgggaa gcagtgagaa ttggggatgg aaaggaatgg gctttatttt tacaaaatat
7261
       gagatgcagt gcttatttaa cacatgtgat ctttacctct cgtatcaatg taagctcatt
7321
```

FIGURE 2-C

37

```
7381
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        agtgaactta accaacaatg acattttcct atcactattt ttccttttat agaaggcaaa
7441
7501
        tottattqcc ctctttttt ttttttttt ttaactatca gactttcctg ctgcatttag
        tgtagtgaac ttYacaattt aatgtccagg aagctttctg cctcgtctgc ccggcatgtg
7561
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7621
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7681
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7741
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7801
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7861
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8221
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8461
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        aaaagagaaa tgtaaatagt tttataaaat acagtcgaat caccaggaac ctttgagctg
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8761
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9121
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9181
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9361
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9601
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9661
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9721
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9781
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9961
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10981
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        cagcatetet cetgtaettt tgteetttge aggetgeett ttegaaatta tteatetgae
11041
11101
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FIGURE 2-D

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11221
11281
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       tecteatqaa qetteecaqa ateteaaate aqtqttagtt getttttgtg eccecatteg
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11521
11581
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11641
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11701
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11761
11821
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11941
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12001
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12241
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12301
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       cccaggctgg gtagtttata ttattgatat aattatgaca ccttgaaaat tcaggagagc
12361
12421
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       tgattagagt accatacgca tgagttttgg aatctacgac cagggttcaa acccagctct
12481
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12541
12601
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FIGURE 2-E

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 18601
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FIGURE 2-F

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18961
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19021
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FIGURE 2-G

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 25681
 25741
        25801
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         cctgggatct ccaaataaga actccaaatt attaacttag attaacttga aaaaattgtt
 25861
        tatctgttat gcgggagtat aaggttgaaa ccctgagaag aaacctgccc aYggtaatca
 25921
        ctcagtaaag gctagctgag ttgccagtag ctttgagatc aacaaaagaa agatgaacca
 25981
 26041
        aaggcattgt gcgataYaat taaaccagag caccctggaa acaatccatt tactttttt
         ctttgtatat tctttatacc taagcaatct gagtggtaac acacttgctt tgtgaaatag
 26101
         ctcqctatta aaaatctqta qtataqtccc ctaatcaaat aagagatgag gaattctcac
 26161
 26221
        taaaattata tottatttga qoaaatatag tqtqcaagat ctatttggtg aaaaataata
```

FIGURE 2-H

```
26281
        actccaaaqt caqttataat aqtqttatca Catagaccta ataaatcaga aagacaaaat
26341
        aaaactaaat taaggaaggg Ragtggttaa cataatcctt gctcctggag tagacatttc
26401
        ttgcctgtga gaaaagtgtg atgaaaatgt atcagttatc tagagaggac acaaacacct
26461
        aaactaagac agatcacctg tatcttccat gtatttttaa gttgtatttg ttgactataa
26521
        atatatggac-gtactctatg ggaaatgtga aaaaatatag gaaataaaga taatgatatg
26581
        caccgatctt caaataaaYg gtaagaactg ttaaactttt catatatttc ttcccggtca
26641
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26701
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26761
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26821
        tccaactttg aatggcttta atttattcca actttactta attatatccc ccatagctat
26881
26941
        ggtacagage tggttcattt cccctcatga taagatttta tctcctagca gacagccctt
        ggttccttta cattgcccaa atgccctgct ctgttttca cccccgattc tggattaaat
27001
27061
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27181
27241
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27301
        tqqtqctaca qcttaattta qttttqactt gaggtataga atgatgctca tatattttt
27361
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27421
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        tttcatcatc cctaaagaaa accctgcact ccattcctca cctaccctgt agctctaggc
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        gaagcatatc atatgtgatc atttatgact ggccactttc atatagcaga atgttttaa
27601
27661
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27781
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        gttttgtatg gacatgtgtt catttctctt gggtatacac ctagaagtgg aattgctggg
27841
27901
        gcatagagta attctagctt taacacttga ggaactgaca aactgtgtcc ggaattggtg
27961
        ggttcttggt ctcactgact tcaagattga agccgcggac cctcgcggtg agtgttacag
        ctcttaaggt ggcgcgtctg gagtctgtcc cttctgatgt tcagatgtgt tcggagtttc
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        gagtgttaca gctcttaagg cagcgagtct ggagcttttc gttcctccca gtgggctcgt
28141
28201
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        aagcagcatg gacccagagt gagcagtagc aacatctact gcaaagagca aagaacaaag
28261
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28321
28381
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28501
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28681
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        ggtgcactca caaaccctga gctagacaca gagtgctgat tggtatgttt acaatccctg
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        tcggggaggc tcgggctgca caggagccca tggagtgggt gggaggctca ggcatggcgg
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29161
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        ggcccgccaa gcccacgcct acctgcaact ccagctggcc cgcaagcgcc gcacgcggcc
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29581
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        tactaccage agtatatgag gattccaatt tetetacate etcaccaaca ettattatet
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        atttgcctga tagctaataa tgttgagtat atttttcat gtgcttgtca gccattagta
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29881
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        ttctttattt cttttttaa ggacagggtc tcagtcgccc agcctgtagc acagtggcat
29941
30001
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```

FIGURE 2-I

```
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  30121
  30181.
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         ctgtaaqagc tctttatata atctgggtac aagttactta atgagatatg tattttcaaa
  30241
         tgtttttcct ctatgctatg gtttatcttt tcattttctt gaaggtgtct tttqaaqcac
. 30301
  30361
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          tagtgtcata totaataaac cattttctaa tocaagatta taaaaactta ctcctatgtt
  30421
  30481
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         catttttgta tatgatatga ggcaggggcc caccttcatt cttttgcatg tatatatcca
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  30601
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  30661
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  30721
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  30901
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  30961
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  31021
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  31201
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          tatatata tatatata tataaaatga atgttgtaat taactagaaa gccagtggaa
  31261
          ccaggcgatt atgatagcat gctttattta tgagaaaata accagtttta aaaataactg
  31321
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  31381
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  31441
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  31501
          taaagttgag taatgattca aataagggtg agataagtct tagctgaaat aaggctccct
  31561
  31621
          tatagtaaaa caatttgatg tttacaaata aacacaaacc cacaacaatg gcagctagag
          aaattaaaca aagagcattg aagaaatttc tccaaaacac aaatttatat ctacaaataa
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  31741
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  31861
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  31921
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  32041
  32101
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  32221
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  32581
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  32641
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  32701
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  32941
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          totttotata ttatttaaga gaaaacagta gagatacaca ttttcaaaaa tgttttgcca
  33001
          tcaataaagc attacaaatt tttgtctata aaaatggcat taaaaggaac tgaaaatgtc
  33061
          aatagggttg caaatgagga atattagcta ccttcaactt tacctaaaaa atcagatttc
  33121
          atagaaagaa gtaacatatg ctaaagaaaa tttctcagct acaagttatt caaccaaaaa
  33181
          acattqttat qqqqqaaaat gttqttctqc tttttttaaa gqcaatgatt ttcctqataa
  33241
          cccccaatcc caacaacaac aaaaaaatat ggtagacaca gaattagaaa aagcacaaga
  33301
          atgaaaaaat agtgtctttt ttatctacat gatcttgagc cacaatttgt ctgggcctga
  33361
          gatttttaa taaaaagtaa ataaaattaa tggactatat tagtgaccct aagacatatt
  33421
          cccatggtgg ggaatgtggt cctcactggg gagagaatgg ttgcatatta aaatcaccca
  33481
          gaagetttat etttgaYtta gagattttga aaaatetetg eccateetgt tgtteageat
  33541
          ccttatctta gtgagtcact gttagttttg ggagctttac ttctcaggtg gaagagggct
  33601
          qqtqaacaaa ctcaqaattq qtgaatcaga tgctctcctg tattttttct agttctaacg
  33661
          tactataaca aatgetttta gaagaaaatt aattteaatt eatggaetge tagteectea
  33721
  33781
          gcaattgtta cagatcaatt caggaagcaa gcagctatgc catccttgaa aataaattac
```

FIGURE 2-J

```
tatgcaagtg aaatcagata gcagaaggga atacaattat ttatttggaa atgtatctga
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33901
       attattctgc aaatgcacat ttaacttcct atttacattt taaaagcatc gcataacatg
33961
34021
       ggtttcgtat tagaagtact tggcccctga gatactgcat taacttactc ccttgctgca
       gaattcccag tattgccata actgaatact.aacagagtgt gtgttataaa aataccacag
34081
       ctattttcaa aataaaatat gctacgtgaa cattaatgaa aaaaagctga atataatgaa
34141
       caatqcaaaa aagctgactt ttcaaacttt tttttagaat tgctttttct ttccagcata
34201
34261
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       qqctctqcaq qqqqcaacaa aaacgccctg atttgtaggg tctgccaatt tccatgttgt
34321
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34381
       qaqaqqtaca gagttggccg tcatgagctg gtagagtcag cgccagcaca tggctgccct
34441
       agageetete cateatgeae ataaatatgt catacagaaa tgeateecat aatgtgtage
34501
34561
       atacatatga tttctcacga aagagaaagt catactacat gacttataac taagtcatga
       atatttttcc tagatttaat ccacaatcat tttaactata aattggttaa gccagtcaac
34621
       tatagtttag ggcatatgta ttacatagat aatttttaat tgttaaggta gttggaatgg
34681
       ttaaaaagtg gcttagcctt ctcactcagg tagagcctaa gttgcatatt ttagaattaa
34741
       tcattaacac actaagcagg cctgcaaaac atccatgaat atatattcc caaaatgaat
34801
34861
       aaatcaaaca cctgaaagct gcaaaccttt atgtgaagca tgaaaaaatg ccaatagcaa
34921
       quatttatat actttatgct tggcctgttt atcttcatgg agattaatag agtgaataaa
        tatttataat aatggtgtaa gaacatgctg aatagtatac tgtattaaag ttacatgatc
34981
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35041
        gcaattttca aattaatata tatttaYtga gctactacta tgtgcaaggc acagcaccca
35101
       ggcactacat gggacacaaa gataaatgca tacagtcttc tcaatgaaat tacaatcaat
35161
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35221
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       aaggaaatga agtaatgata acttgaactg aagatgaata gaataggttc tactaaaatt
35341
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35461
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       tctgccttag caggtggcat cttgaggctt ttggattctg tcttcaagtt ttttaatgag
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35581
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35761
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35941
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        atgcacaatt gtgtattaga ttctgtggct agcaaacgaa aaattttcca agctgacctt
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36601
36661
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36721
       caaataatta cgttttgatg gggttgagta aattaaaaat caattgagat tcctttactg
ctctattct attctatat tgccttgtaa ttagcagaga gcctggcaca aataggtatc
36781
36841
36901
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        tatttatttc catatacata gtatttattt ctacatacat ttctacataa ataacattta
36961
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37021
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37081
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37141
        ctttaaatta ttaccaatcc ttacaacttc catctcttac tgcatctttt ttttttcca
37201
        gactcatatc ttggacttgt aaatctaaac ttgccaaaaa ccaaacacat taaaaaattt
37261
37321
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        gatagtttca gttctgttta ctYtgtccct ttagctaaaa atcattccgc cctactcatt
37381
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37441
        caatttctca caatttagtc catgtcctcc tcaaatgatg gttatatcct atcacccacc
37501
        tattcatgag cccctaagga gtgccttcct gtccttactt ggatcaaagc aactcttttt
37561
```

FIGURE 2-K

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catctatatc aagcatcttt tttcacttga tccacttttt gtatatgttc atttttccat
37621
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 37681
37741
        tttttttatt ttattttta ttttacatat atatatagag agaggcagag actttctctg :
37801
        tcacccagge ttgagtacaa tggcacaate atggctcace gcagcetcaa etteetggae
. 37861
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        gttctgaact cccgggctca agtgatcccc cagcctcagc ctcccaaact gctgggatta
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 38041
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        ctgtcctttg ttttcctctt agtcctttat ctgatatttt cttaatattt tttcttttcc
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 38161
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        38221
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 38581
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 38641
 38701
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 38761
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        tqttctcttt catccaactq cttqtcatat atctgaggtg gaggctgccg aataaaaaca
 38821
 38881
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 38941
        cttgccctca tttatttcgg tgatttcaac cgtatataag ttatgaggaa attacagtag
        ttcagaagtt aaaattttcc tgtaaactta tggaggattc attcatattg caatatttgc
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 39061
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 39181
 39241
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        ctaaagaaaa gtttatattt ctcaacagac catagtacta gtcctcaata taaaaaaaat
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 39361
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 39541
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 39961
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        caagattttc agagacagct tctggcttct gtgagagctt tttggctcat gaacagcacc
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        agacacaaat attcatccta gccctggcat gctggggcct cacatcctgc aaagtatctg
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        agaacacaac acattgaacg tatataaggt gacaggactg ggatagtcag gcactgctct
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 40801
        ccctctgagc tgttggcacc tccttcttct tctaacaata gatccagctc atgatcctgc
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 41101
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 41161
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        tgcgaatgtc acctccagtg aaagggcaca ttcacataca gatgtcttct atgtgacaat
 41221
 41281
        ataaaagaat aattgaccaa taatccagag agagcaatgt tacaacacac acgtataagt
        gctgggcagc aatcatcagg atgagatagt tcaaaacatt ccctgcctcc ttccgctaag
 41341
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FIGURE 2-L

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qaqaaqttqq tatttqaqca ctcqcttqtq ctctttccct atcttattta ataggaatta
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41461
41521
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41581
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41761
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41821
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41941
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       acatggcaga ctatataaaa aactgagatt tcaaaattga ataaggtgac tgctgaccac
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42061
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42361
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42541
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43381
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43561
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43861
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44281
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44941
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45001
        agataatttt caaagataca tgggaagtat ctttttcaac agcattatag gatattagtg
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45121
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FIGURE 2-M

45181

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45361
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45421
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45601
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45661
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45841
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46621
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46741
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47461
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47821
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47881
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48421
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48481
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48541
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48601
       gggaaaagat tccctattta ataaatgatg ctgggaaaac tgcctagcca tatgcagaaa
48661
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48721
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48781
       ggacataggc atgggcaaag acctcattac taaaacacca aaagcaattg caacaaaaga
48841
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48901
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FIGURE 2-N

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49081
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49201
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49561
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       cataccacca gagaaaatta ttttatcaga aaaaaaaagac aaaaaaagag gggaagaaat
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51361
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       aggettatag ttectactaa tteaacetat tgaaatatat tttaaegttt tattaggeaa
51421
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51481
       qaaatgctgt taatcaggat tctagataca aatttccacg tccactcaga ggggcgagaa
51541
       tgtgcaatat attgtgatgc tgccaccttg tggcaagaaa aaatgaaaac attaagaggt
51601
51661
       gctttgtgtg catatttatc attttcaatt aaattgctct agtttatggt tcagctacgg
       ctgcacattg aaatcatctg ggagttttaa aaatactgct gcctagatcc cacctcagag
51721
51781
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       atgattctaa catgcagcaa agattaagac ctctgctcta accacttata cagtagagaa
51841
       gcaagtcttg tcatttgcct agttatgttt catttgtata gacgcaaaag aaaacattct
51901
51961
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       tgatttctgg acagatatat catatactat gattttaaag aacaggacaa agaaatttgt
52021
52081
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       aaagtgagca gggagaatct ctgagcctca taatgcgtca caggttttct gaaaggaaca
52141
       atggaaagag cactgaagca ccattgactc tggcactagt aagatgagtg accttgagca
52201
       agtcactcag tttqcaatga aagattttca tctactgctt tattcaagag aaactagttc
52261
       caaatgttca acaaatatca taccaggtaa ttcaacaaaa ctttcttaag tacttgcaat
52321
       gcgaaaagca tggaattata atgtgttata aatggaaagc actaatgttg cttagagaca
52381
       tcatagcatt aggtgaccag aggaaccttt gaaagctagt aatgcaaatt ttaattatga
52441
52501
       tctgaactga gtgtaattag aaagcttaat tacataatgc tccagtggtt tggcaaagaa
       gttgaattca gttttctcta tttttcattc tgttctgtag ttttctcaga tttatttatt
52561
        agctctacac catcaaaaag tgtaatcatg tcttgaaaat gaaatttctc tttcctgctc
52621
       cttqqaaatt aaaattttct atggttcttt aactgaaaag tttcagtaat tgcaccacca
52681
```

FIGURE 2-O

```
atcacccagt gccttggtca ggaatctttc tttcttcatt cgttcattta acacatattt
52741
52801 attaaccctc taccatatqa tattactcat ctttgaattc cacctccctt aaattccaaa
       tttaattatt tacaattcat gtcaattatt agcttctaaa catctcttga atattctgYc
52861
52921
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       tcaactccag tcccacactg cagacagtgg ccctttgaaa cttcaaatct gctaatgcta
52981
53041
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53101
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       cccttctcca ttaaqtcact cagaaagctt aaagctttgc aattctctcc accctctctt
53161
       gaccetggga tttttgcata taccetttet tetgettgee tttetteact tggataattt
53221
       cttttttagc ccttcatgtt cctgtttgaa aattaatcac tccaagcagc cttctgtaac
53281
       ccacattact gggttatttt tatgtgtttc caatgtacaa taagcttaaa atttggaata
53341
       cgtatcatca acatttactt atttatcttc tcactagacc atgggacaaa gaattgagaa
53401
53461
       taaaagacct aggaatccaa cttacaaggg atgtgaagga cctcttcaag gagaactaca
53521
       aaccactgct ctctatttgt ctgttattcg tgtataagaa tgcttgtgat ttttgtacat
       tgattttgta tcctgagact ttgctgaagt tgcttatcag cttaaggaga ttttggactg
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53641
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       cctgtcttcc tatttgaata cgctttattt ctttctcttg cctgactgcc ctggccagaa
53701
       cttccaatac tatgttgaat aggagtggtg agagagggca tccttgtctt gtgctggttt
53761
       tcaaagggaa tgtttccagc ttctgcccat tcagtatgat atttgctatg ggtttgtcat
53821
       aaatagctgt tattattttg agattttggg ctgagacaat ggggttttct agatatacaa
53881
       ttgaaaatct agaagaaatg gaagcacagt atatagtaca tagtagatat ccaacaagta
53941
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54001
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54061
       tttaaaaagt agattccagc ttttgatata cacatattag ccacacaatc atgggcaatg
54121
       tgcttaacat ccattaacat cctgagcttt agtgtcttca attctaaaca cagatacatt
54181
       cattcagcaa atattgatta tatgactact aagggccaga cagtgttcta ggtagttggg
54241
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54301
       tqaqacagat aataaaaaga gatatataat gtcaaacagt gacacataga gaaaaaagat
54361
       taagaggcta gagtgtaaca gagtactatt ctattttttc tttttagttt ttttcttttt
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54481
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       gctgactttc aatagatcac agcaaggatc ccctctgcta catatgaaac cctgacccag
54541
       aagcaggtca tctacttatg ttttagtgcc aggttacaca cgaatgtgtg ttacatgacg
54601
54661
       qqcaaqqqqq cqqccqaaqa qtactatttt agaaaggatg gtcataaaag gcttctttga
       gaaggtaaca tttgagcaga gatttgaatg aagtaaagga gggagcaatg tgaatatctg
54721
       gaggaagaat gtcccaggca gaaggaaata caatgcaaag accctaaagg gggagcttgc
54781
       ttggtgtggt aaggaaaccg caaggatgcc atatactggt gcagagtgga aaagggaagc
54841
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54901
       ctgcagtcat gaaaacaaat tggtgtcatc actagcacct tttagtgtaa ctaagaagag
54961
       taaaatgaga tagaaaatat cagtgtatgg tttttctttt gtgtgtgtgt acgtgtgtgt
55021
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55081
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       ggaattatgt gaatgtaacg tgttttacat tttaaaagga aaattctagg cattctgcag
55261
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55501
       qaqqcttaaa taagattgga tatcagaaag ggttttataa acactagaga agtgctcagc
55561
       agagtacagc tgagttcaat tcaaagggca tttactgacc atacactatg cacctgccat
       tactctcact gttttctctg cactcggtag ataaaactga atttctgctc ccaaggaact
55621
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55681
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55741
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       tattctgtag gacaaatatg agctaaaaat gaactagaaa atagctctag gtgaaaaaca
55861
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55921
       cctacagtca caaaacaaaa gcaaatgaac aagggaaaga ggatcttcag ccctcctaca
55981
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56041
56101
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        gaattagaaa cattattaag gaaaattgat ttgagtatac ttcactaatg ttagagggat
56161
        aatattatat tttaggttga aatgtaataa tttttttaat tccaaagtgt ctattaattt
56221
56281
       taaaatatac atactitttg ttacaaatat ttattttcc ccttcatacc actaatctct
        gtgaaaaagt ttagaatgtg acataaaggt tctaggttaa tgaagtcttt caatcaagca
56341
        taaaqacttc tqctaatcta qtaaaaaccg ccccttctac ctacatggat tcaatatatt
56401
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56461
```

FIGURE 2-P

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agaaagtggt gctctgagga gagggagatg gggaacagaa tcacttgaga gtgaggattt
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56581
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        tttaatatag attgatgagt tgataacgtt aatgagttga tgactgtctc tcaggtatgt
56641
56701
        tggggaacaa aaaagtttga gaaacaaata cagtcataaa gaactatatt ctaataataa
56761
        qqcqttacca ttqctcctac tttttaatqt attatataca ttattatata atacttttta
56821
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56881
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        acatgatagg aactgataac atttccattt ttcttatgtc acatagacta aaactgttca
56941
57001
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57061
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57121
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57181
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        cttcctaaat catctttcta ctattttatc acttcatcag tcagaaagaa tgatctacct
57241
57301
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        tgggtaccct ctgggaatga cttaaaaggt gtttcctgac caggaccctg cttacatttc
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57421
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57481
57541
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57601
        gaggetttte tteeteetaa aaaceteeta tqtetqetat aggatgagtt atgeettatt
 57661
        cctttgtgtt tctatggcac tagtactatg gttatagtat cttacttact tacatattaa
 57721
        ctctactaca aactactaaa taacagaaac tatgtctttt tatcattaga attagtcaat
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57961
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58801
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        tccagacttg tggtctatgt agagttgtga tgacattccg acttcatgtc tatagctttc
58921
58981
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59041
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59101
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59221
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59281
        aagaaacaaa caaaaatctt tggagacaaa catggcagag gaaaataaat atcgcaaagg
 59341
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59521
        tactictqcc tccaccactt tccttaaaaa aagtaggact tttacagatg aaagagcatt
59581
59641
        ttaatacaaa ttttaaaatt acccqaagac aataaattat ttcctaaaac gtgtattaaa
59701
        tctttttgtt atgtctataa atgataatct agtctaagag taacttatca gcatttttgc
59761
        agtecectee ceceateeac tgaaaacttt etttactaga eteatgattt teaaaatttt
        aagaattaaa tttggagtaa aggaactccg aagatctgaa aaagcctgtg aactggatgt
59821
 59881
        ccagaaagat gtaaatacat aattattgat agaaaatttt gggatgtttt tcaaaagccc
        ccagaagttc ctctaaggaa cccttagggg tcataggaaa gctcagtgct gggtagtgag
59941
        ctcctaagag cagagaaatg ccctcctgtg tgcatctcta gatctggtac agtttcagca
60001
        ttcatagggg tgctataaac atttgttacg ttgaatcatg gaggataagt atgtatatac
60061
        tcgggtgttg ttgttgctgt tgtttgagat agagtcttcc tctgtcacct aggctggagt
60121
 60181
        gctgtggtgc aatcttggtt cactgcaaac tccRcctccc aggtttaagc cattctccca
60241
        ccacagcete ccaagtaget agtgtaagee accatgeetg getaattttt gtatetttag
```

FIGURE 2-0

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60301
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60421
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       ttgàttttga gagcaaagga gcaaagaaaa atctggcaaa tagcaaacct actacttaaa
60481
60541
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60601
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60661
       cacaatgata tgaggatggg taggagtgcc ttagagctct ccttgaacat gtatacacag
60721
       tggttaagag gagattettt gatgatggae aaaaatteaa gtetagtttg attgttttag
60781
       caacattaca qqtaaqcaaa caaggcagga atgcaaatta ccaaaagagt tatgcttcct
60841
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60901
       ctgtcttctg acatactcct attctttct ctttttatt cttcctctta gtataaaatt
60961
       tggtaaattt tagttaacag aacatctcac aagttcccac cctgacttct ttgcttattt
61021
       catagaagga atSctaaaaa agaaaaatat atatttttt ctcccacagt ttatggatta
61081
61141
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       aaataaaata cactctcaca aatgcccact acctcaagat aaataggtag atctcacaat
61201
       atctcaqata tcacctagga gagaagaaat aaaatcaagt atttggaaga acctgacaga
61261
       ataccttagc catacctcag cctttcagag agcaacaggc atgaaatgtt ttagaaaaat
61321
61381
       aatttctqtt cccttccccc ttttcataaa gtattctctc tcagtgatcc attcaaaaga
       ttaatagcac tcatggtcta aagtgttcaa gataaaacat gaaaacaaaa accaaagcat
61441
       ggattctact agacaacaaa acatgtctct cctaagaatg aacaattcaa ccattccagc
61501
       tittcacacc tgagaatctt ggattcagtg gattctgaat atcccaatga attaaaatta
61561
       agatgaacct ttctcttcag gaatagaact tgctaaaatt agagataaat gagttacata
61621
61681
       tittcagtga aatacatatt cctattataa gtcatatagg gagtgaggct cctaaaagca
       ggtggctaac tctatctaca acaaacattt tgacaagctc ccaccaacat aatacatggc
61741
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61861
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62581
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62761
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62881
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63001
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63061
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63241
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63361
       aacaaaaact gtagtttcag aatttcagat ggattagtta ttcagaaatt gtcttgagga
63421
       catgocctaa cottttgata toactoatoa aaggaaaatg tgactoacaa agactttaat
63481
63541
       cccctttcct cccaacggga gatacagtct gtatagagag ctgtttgcat ttataactca
       Yttaaatcat gtcttccaga tacttcaggt ttaactcaca gtgctacact caaactaacc
63601
       aatttaataa aaggattata aaatatttga agcaaactta tgcatatttt attcaatggt
63661
63721
       ttatctccaa acagtagata tctactgatg aactatttga acattagatg catcaaattc
       atattcattg tagctcatat ttttccttat cattcctaaa ttcatatata ctgagtctaa
63781
63841
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       gtttcaggaa tttattatgg attcaagaga attcagtaaa agacaactgg ttaagccaca
63901
       gttaataaag gtagaaacaa tgcaaacaag aactcattca tggagtagat ttaatagagc
63961
       aaqtaacaca qqatattcat aatcaaatga tattagcttt tacagtaaaa atgtatttga
64021
```

FIGURE 2-R

```
gagaattaaa agtcagtgat aataaggaat gagaataact ccttcccatc atcctcagtc
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64201
       ataaattaaa tattttatt tagttgctat agtaaataga aagatttaat ttatagttta
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67801
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FIGURE 2-S

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FIGURE 2-T

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71881 -
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72301
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72361
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75361
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FIGURE 2-U

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75541	ggctatgagt	cttcttgaaa	ttttaaattc	acttttgaaa	cttatatact	tttggaaaac
75601	tagcaattat	ttaacaaaat	aagatatcat	gaaatagtct	ttggggtgta	cagataaaaa
75661	gtcattcaga	taacacaaga	tgaatctcat	attctgcaga	taaacttcta	tataaatcat
75721	gtgattcaga	agaaaaatat	ataatgacac	atcatagtga	catttttatc	ctgaagttac
75781	ctcaattatt	tatatttta	aaatgacaaa	tacacaaata	ttttagatta	tattcattta
75841	cattttccta	aactatcttt	aagatatttt	ttcttctcta	aaaatctgga	attttttct
75901	atttttatgc	atatcaacat	aacttttata	gtaaaacaac	tcattagttc	tttgtcagat
75961	tcctaaaaat	catatttatt	aaacaaagaa	gccacctatt	tcatacctat	tgttttactg
76021	atgatatcac	tgaatattgt	tttcaatgaa	atataagggt	gaacagagga	atattcaatt
76081	taaaacaaca	gatttctatc	caagtacatc	caagtttaga	aagtacatta	agcatgggga
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76201	ctctttttgc	agacatactc	aatgattgag	attctctttt	ttatctgtca	ttaatattcg
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76321	ctgatttaaa	cagatttcct	cgccatgtgc	cagtgaataa	tagagatctt	ggaaattccc
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76441	tttggtgtta	agttagttaa	ctcatttcca	ctaaggtaag	gtgtgåcagt	taagggactc

FIGURE 3-A

>3:184282401-184429700

, 5.10.120.		. • •				
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841	ggttacaggc	gcccgccacc	acgcccagct	aatttttgta	ttttagtaga	gacggggttt
901	caccctgttg	gccaggctgg	tctcgatctc	ctgaccttgt	gatccgcccg	cctcggcctc
961	ccaaagtgtt	gggattacag	gcgtgagcca	ctgcgcccgg	cccagggtct	cctcttttct
1021	aacagctcgg	gtacctttct	gggaacccag	agacgcttct	cagccgggag	aaagccagcc
1081	actaggcgag	caggagccta	aaaaccccta	agcaccctga	ctccatgtct	tcccagggag
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1201	aggagcacag	cccagaggcg	ctaggtctgg	ctgggagctc	gcgctgccga	ctccccggcg
1261	tgcggcgtcg	gggaacctct	aggagccttg	gattcttcag	ctgtaaaacg	gacataataa
1321	tgcccactcc	cagtgtgttt	ttttatttc	ttttttcttt	ttctttcttt	gtttttgttt
1381	atttatttt	gtttttgttt	ttgagacagg	gtctcactct	gtcgcccagg	ctggagggca
1441	atggcgtgat	ctcggctcac	tgcaaacttg	ggttcaggcg	attctcctgc	ctcagcctcc
1501	acagtagctg	ggattacaga	tatacaccac	cacgtccggc	taattttttg	tatttttagt
1561	agagaccagg	tttcaccgtg	ttggccaagc	tggtctcaaa	ctcctgaccc	caggtgatcc
1621	acccacctca	gccttccaaa	gatctgggat	tacaagcgtg	agccactgtg	cctggcccca
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1741	tttttaaaat	cagggtctcg	ctctatcacc	caggetggag	tacaataaca	tgatctcggc
1801	tcactggage	ttcgacctcc	tagecteaag	tgagtctccc	accttagcct	cctgagtagc
1861	taggaccaaa	ggcgcgtgcc	accacacaca	gctattttat	tttattttat	gtagagagga
1921	agteteacta	tgttgcccag	actactctca	agttcctggc	ctcaaatgat	cctcctacat
1981	tagecasees	ttgggattac	agggggggg	cacaacccac	ggctcaacaa	cactaacaga
2041	cayccaacca	atgtcttatc	teetteetet	attaattaaa	ttatctatca	aaacaacgat
	caacccccca	ggcttgagtc	ccagtgggg	atacacattt	aagcagtata	ttaggaSacc
2101	gttttgacag	ctagattgag	ccaytygyga	ctaccacacc	attattttct	gaaaataac
2161	ciccitatea	actattttgt	gyccccagc	tactccaa	actactcea	tasacttaac
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2281	caaagcttgc	agtgtgtttc	agaatggaat	ctttatggtg	t+tereses	tttattassa
2341	gccagtcaac	ctagtttcag	caactacctg	culcugate	cttgagacag	catttaaggg
2401	agacgataat	taagtgggta	tagactgtgt	gccaggcact	ccccctatcc	catttaageg
2461	ccatagccac	tctatatgga	cactgttgtt	attategetg	testasstas	cagacggaga
2521	aactaagcac	aaagaaggga	gttgcccaga	gtcacttaga	LaatadataC	cgaaacctga
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2761	ccaggcgtgg	tggcaggtgc	atgtagtccc	agctactcgg	gaggctgagg	caggagaatg
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2881	gggcgacaga	aggagactcc	gtctcaaaaa	aaaaaaaata	aataaaataa	agctgctcct
2941	cttaccctgg	aaattccaag	ggatttagga	gctctgtttc	aggaaccagg	gtcaaagacc
3001	aagtattaaa	acaaaagatt	ctcctagaac	tctggcatat	aaggatttta	ggagctctgt
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3361	gtagtgagct	gcgatcaagc	gactgcactc	tagcctgggt	gacaaagcca	gaccctgtgt
3421	ctaaaaaaaa	gaaaagaaga	ggaaaaaaaa	aggtttttat	ttcaactaag	ttgttggatt
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FIGURE 3-B

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3721
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3901
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4981
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6241
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6781
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7081
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         tgattcaatt acctcccct gggtccctcc cacaacacat gggaattctg ggagatacaa
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7201
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FIGURE 3-C

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7261
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7381
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8761
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10921
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FIGURE 3-D

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 13681
 13741
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 13801
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         gaaaatgtga aatcaaatca cccctgacaa ttccaaaact aaYggaatcc taacataact
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 13981
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 14041
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 14161
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 14281
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 14401
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         tttaaatctc tactagctgg ataacaatta tttatattaa attctctctt gaaataactg
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 14581
         ctgagggccg ggtgtggtgg ctcacacctg taatcccagc actttgggag gccaacgcga
         atggatcacc tgaggtcagg agttggagac cagcctggca aacatggcga aacccggtca
 14641
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FIGURE 3-E

14701	ggagatccag	accatcctgg	ctaacatggt	gaaacctcat	ctttacttaa	aaaaaaaaa
14761	ggagacooag	caaaattagc	cannentant	ggcagatgcc	tgtagtccca	gctattcagg
14821	adacacadaa	aggagaatag	catassecca	ggaagaagaa	cttgcagtga	accasaatta
	aggergagae	ctccagcctg	agtgaacceg	agaggeggag	tctcaacaac	aacaacaaca
14881	Caccactgca	gcatggtggc	ggtgacagag	agagactccg	acttaggagg	ctgaggtagg
14941	aattageegg	geatggtgge	aggigeetgt	aattttaatt	accegggagg	casttaasts
15001	agaattgctt	gaacccggga	ggcggaggtt	geagegagee	aagactgcgg	caccicacic
15061	cagcctgggt	gacaagagca	aaactccatc	tcaaaaaaaa	aaaaaaagaa	aaaaaaatct
15121·	gacaattaaa	taaagaacag	aaaaaaaatt	tgaatggcaa	atacaaagct	gaaaagaaat
15181	aactgagaat	aaataactct	gaaaatagct	caaaaactaa	atacctcaaa	aactctttaa
15241	aaattcagaa	aatataatgt	tcaaatatga	agtaatgctg	aaaatgaaat	aactaaaaac
15301	caagtaactt	gaaaaaaaga	acataaaaat	aaacaactca	aatataaaat	aactgaaaat
15361	aaataccţgt	gaacataagc	aactcgaaaa	ccagataact	aggggaaacc	cttcattaaa
15421	acatttcact	ctgaaaataa	ataacttgac	agtagttcat	gaacttccag	tgagtgttta
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15541	ataactatga	aggtaaataa	ctcagataat	aattgtaaag	ataattaaaa	ataaattccg
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15721	aatccaaata	aaaaattagc	cgggcgtggt	ggcgggcgcc	tgtagtccca	gctactcagg
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15841	ccactgcact	ccagcctggg	cgacagagcg	agactccgtc	tcgaaaaata	aataaataaa
15901	taaataaata	aattccaagc	aaattaattt	gaacatctgt	aactcctaaa	acaaaacaac
15961	tacatataaa	taactgaaaa	tgaacaacta	aataactttg	aaaataaagt	aactataaac
16021	cantaactna	aactataaaa	ttaaataacc	agaaagctac	aaagaaatga	aaatcaacta
16081	ataaaactaa	aaataaaata	caactgaaac	taacaaaact	catttaaaaa	ctaataaatc
16141	getagateaa	atacctcaga	aagtaacttg	gaacgaactc	tetetacaac	gaagcaatct
16201	taaaaataaa	acgaacaccc	catgaacccg	caceagaata	ctaggaggag	daccadagac
-	toggcactaac	cggcccccgc	cacgaacgcc	caactccaac	tectecaagg	ctcagactaa
16261	coccagion	accgattccc	accesses	ggccccggc	agacatatet	acagggetat
16321	geggetetea	cgatttgggg	accecycect	ggagaaacyc	gggcgtgtct	gaaggaatt
16381	Ligatigica	cgatttgggg	gcggggcgga	ggacggggcg	accecacaca	agcaccaage
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16501	gcaaagaatt	gcccggctcc	gaatatcgaa	gracegeggre	tasasastas	gggctgcggg
16561	ctctgctcgc	ctctgcaggc	gccttagagc	ageteegagg	teeeeegtge	ggagetagge
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16801	ctcctgggcg	gaggtcctcg	ggcgcagcgc	cctcgcctgg	aaaccagccg	tcgccccgc
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17101	ccgcgagctg	gaagggaggg	gacgggtgca	ccctcagagt	tattgctgga.	ggctgtggcc
17161	agaccgggca	aggtggtgac	tcccgctggc	aggctgaggc	ccaccccagc	cctcccacct
17221	gggccacggg	gctctcagcg	ggagccccag	ttatgaccgg	acaccagcgc	accgccaagg
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17341	acctcggctc	cctggcttaa	ccaggtcctt	atgggtgaga	atcctgagga	gggggagagg
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17521	cgccttcaca	gtcttcaaag	gtgtccatgg	agctaaactc	cctgctggag	cagccttagg
17581	gagagaaagg	gaaggatggg	acctctatag	ggtgggagga	catcccctct	gcccatggca
17641	gggtgtagca	ggcagtgcct	gttgcaggca	cagtcctccc	catctctaac	tcctgctctc
17701	caagggcctg	cactacacta	gactatgagg	gggtctgtga	tctccaggct	gcttttccag
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17821	cccattcctc	caagaaaaca	gtcattgttt	tttatattta	ccaqtcttct	aaccacgcct
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17941	ccctaattaa	tatccatttc	ccatctccct	ggcagectet	gccaagtgtc	actgctcccc
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18241	cagilgggga	tacagacage	ctactcttt	ccctcactct	gagtgagatg	gagtctctgc
18301	ageigieite	tananagaa	gagtagaga	cadadcatct	acadaaada	cccaacacag
18361	cccacatggc	ccacaagcca	yygragggag	cayaycacct	gcagaaaygt	cccaacacag

FIGURE 3-F

```
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18661
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22021
22081
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FIGURE 3-G

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22141	tatttttggt	aaattataga	Citigaagac	aaaattatgg	igiticiti	actification
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22261	atattaaatq	ggcaaattct	atttttattq	tctttcaaac	tagatttttc	tcaatgcaca
22201		tctttttctt	++++++++	gagacggagt	ctcactctat	taccadacta
	actitititi	CCCCCCCC		gagacggagt	teegeeetae	cgccaggccg
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22501	+++++n+aa	tatcagtaga	gacagggttt	caccatgttg	accaggatag	tctcgatctc
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22561	ctgaccacgi	gatteegeeta	Collegelle	ccaaagtgct	gggattacag	gegeaageea
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22981	gtttgagccc	ttcatcattg	tgttgtgtgt	gctgctaacc	aatttcccct	ctctgtcttc
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24841	cagtaaaaca	gtcttagctt	ataaccttta	tttttttat	tattttatta	tttttttatt
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25261	cttactgaat	cttaccttct	tecettecee	tacccagacc	ccatcccagc	taacacataa
		ctttctcctc	atataaataa	2002003000	aaadadagga	attaccatan
25321	aatcctttcc	Ctildtddtc	acyccaacag	accaycayyc	aaayayayca	anan Baarar
25381	tggaaggaga	aacgggtcct	agtcgtggtg	aggaggtagg	gergergert	aacanaggcc
25441	gagagggaca	tgtctgatgc	tcaggtgatc	cactaggaca	tctcgcaata	ctcccatgcc
25501	cagctgtaac	tatgatggcc	aagtccaaga	accatagcct	gataagagtc	taggaccccc
25561	actatacato	ccaccagtag	aagtgcctga	tagagagaga	gatgtctaga	atgagtagga
	accatacaty	acaaagcaca		- Jajanana	acadataaca	gccacagatt
25621	yggaatgatg	acaaagcaca	yccaayyacc	aaccycaycy	tataggeggea	tananagare
25681	gagttaagta	ggattcttgc	tgtgttccct	agrggaagca	coccoccige	Lyayacccac
25741	tgaggttaaa	gttggagaca	tggggagaaa	acaatgtccc	cgtgttcatc	actagagtca
25801	tgatgggcaa	ggtcacaact	catttgactt	cttggctccc	agattcatat	actctgcctc

FIGURE 3-H

```
25861
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25921
25981
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        cacgtctatg gctgattctc ttttgccata ctgagtcccc tgatcaaagc agtgttatac
26041
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26101
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26161
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26221
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26281
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26341
26401
        cttatgattg atcacacact gtactttcta acctgaaggg gtctggtaaa atcaacttgt
26461
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        atttaaaagt ggtagcagct agagcagtct tgaagacatg gagccctcac tgctggggcc
26521
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26761
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26821
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26881
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26941
27001
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        atcagaagga ggtactcctc aagggacagt acctgaggga gacacttcca ctagggaaca
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27121
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27301
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        agaattette etteteteaa attetgeeae ttttaceage eeagtetgee tetgetgtag
27361
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27481
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27541
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27601
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27661
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        teccatecat tetgggacec etectgetac taacggtett cagtcaggtt ceccagaage
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28141
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        tttttcatct tagtgctgct gccgtaactt tggcagtttg agatgcgaca gcaaaatgag
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29101
29161
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29221
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29401
29461
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        cccaaagtgc cgggattaca ggcatgagta ttttatttat ttatttattt tttcagacag
29521
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FIGURE 3-I

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agteteacte tgteggeeag getggagtge agtggeacea tetegeteae tgeaacetee
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29701
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29761
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29821·
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29881
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30181
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33241
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FIGURE 3-J

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33961
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36841
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36961
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FIGURE 3-K

	_ •				:	
37021	cqaaattttt	ttttcctttt	tttttttt	attatacttt	aagttctagg	gtacgtgtgc
37081	acaacatgca	ggtttgttac	atatgtatac	atgtgccatg	ttggtgtgct	gcacccatta
37141	actcatcatt	tgcattatgt	atatococta	atoctatcta	tecettecee	ctcccccac
37201	acceateace	gccctggtgt	atastattcc	ctaccctata	accaagtgtt	ctcattattc
	cccaccacag	tatgagtgag	gegaegeeee	atttactitt	ctatacttac	antagttag
37261	agttcccacc	tatgagtgag	aacacacggt	gtttggtttt	tractic type	gatagittyc
37321	tcagaatgat	ggtttccagc	ttcaccatgt	ccctacaaag	gacatgaact	Cattgtttt
37381	tatggctgca	tagtattcca	tggtgtatat	gtgccacatt	ttcttaatcc	agtctatcat
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37621	cttccacaat	ggttgaacta	atttacagtc	ccaccaacag	tgtaäaagtg	ttcctatttc
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37741	tataaaatat	tatctcattg	toottttgat	ttgcatttct	ctgatggcca	gtgatgatga
37801	gestetete	atgtgtctgt	taactacata	aatgfcttct	tttgagaagt	gaccottcat
37861	atattttaca	cactttttga	tagaattast	ttttttctta	taaatttott	taadttcttt
	accepted	gatattagcc	ctttatasas	taggtagatt	ctaaacattt	teteceatte
37921	gtagattetg	gatattagec	turturtaga	tyggtagatt	gcaaacaccc	tatttaattt
37981	tgtaagttgc	ctgttcactc	tgatggtagt	ttettttget	gegeagaaae	ttttagttt
38041	aattagatcc	cacttgtcaa	ttttggcttt	tgttgccatt	gettttggtg	ttttagttat
38101	gaagtccttg	cccatgccta	tggcctgaat	ggtattgcct	aggttttctt	ctagggtttt
38161	tatggtttta,	ggtctaacat	ttaagtcttt	aatccatctt	gaattcattt	ttgtataagg
38221	tgtaaggaag	ggatccagtt	tcagctttct	acatatggct	agccagtttt	cccagcacta
38281	tttattaaat	agggaatcct	ttccctattt	cttgtttttg	tcaggtttgt	caaagatcag
38341	atggttgtag	atgtatgata	ttatttctga	gggctctgtt	ctgttccatt	ggtctatatc
38401	tctqtttttq	gtaccagtac	catgctgttt	tgattactgt	agccttgtag	tatagtttga
38461	agtcaggtag	cgtgatgcct	ccagctttgt	tcttttggct	taggattatc	ttgacaatgc
38521	aagctctttt	ttggttccat	atgaacttta	aagtagtttt	tttccaattc	tgtgaagaaa
38581	gtcattggta	gcttgatggg	gatggcattg	aatctataaa	ttaccttggg	cagtatggcc
38641	attttcacga	tattgattct	tcctatccat	gagcatggaa	tgttcttcca	ttggtttgtg
38701	tcctctttta	ttttgttgag	cagtggtttg	tagttctcct	tgaagaggtc	cttcacatcc
38761	cttgtaagtt	ggattcctag	gtattttatt	ctctttgaag	caattgtgaa	tgggagttca
38821	ctcatgattt	ggctctctgt	ttatctatta	ttggtgtata	ggaatgcttg	taatttttgc
38881	acattgattt	tgtatactga	gactttgctg	aagttgctta	tcagcttaag	gagattttgg
38941	gctgagacga	tggggttttc	taaatataca	atcatgtcat	ctgcaatttg	acaatttgac
39001	tttctctttt	cctaattcaa	taccctttat	ttctttctcc	tgcctgattg	ccctggccag
39061	aacttccaac	actatgttga	gtaggagtgg	tgagagaggg	catccctqtc	ttctgccagg
39121	tttcaaaggg	aatacttcca	atttttaccc	attcagtatg	atattggctg	tgggtttgtc
39181	ataaatagtt	ctcattattt	tgagatacgt	cccatcaata	cctagtttat	tgagagtttt
39241	tagcatgaag	ggctgttgaa	ttttgttgaa	gacctttact	gcatctattg	agataatcat
39301	ataatttta	tcttcggaga	acactggaaa	ttaaatgatg	gcttgcagca	atctggagag
39361	catttattca	aggaaaatgg	ctatatetea	gtatgactaa	tgagcttttt	aacttgccct
39421	atttctatcc	tecetteet	tagtagtage	cttagaaatg	aacagcctgc	aatgatagtg
39481	accectacce	gtctggcagc	catoddagaga	acadaacada	aatgggggaa	ctatggagcc
39541	taattatta	agaattatca	ttatttatc	tatccacaaa	tttctaggaa	tacctgacct
39601	generatetat	ctttattagg	cctaactcaa	aacttaccca	atotoaaaao	tetttteece
39661	gcaagtctgt	gtagaaaatg	attacagge	attatttaac	ttcttaatta	ctcgaggtat
39721	taaataaaa	tggggcaaac	atagactaat	cagaaggttt	aaaatgaaat	actcaggaat
	rggctaacag	tagagggttg	taaaggctaat	aaaatattta	tgagactcta	gaagaccatg
39781	aagatgetea	ctgtgaacat	attaggetee	gatetgegaa	aaccccacaa	tettacetet
39841	cacacatttc	gatgatctgc	gttcaggaca	gattegegaa	aggettagaag	tatcaaatac
39901						
39961	caggctgagt	gtgaaggtgt	gecetaatgt	gcacacagag	teattagta	ttagattagaa
40021	gacttactgc	tttcaggtgt	ttaaagaaat	ctctgtcatg	ccattagtat	ctagattact
40081	aagctaactg	aacagaggct	tcaatggctg	cacataaata	cagacttcac	agaarragir
40141	tagaaaagtc	actataacaa	acaacaataa	acagcaacac	caacaaacag	tagaggtggg
40201	aaggtccaat	ttccagagtt	gctacattat	gttatttaaa	atgtgcaatt	ctaacagaaa
40261	ataatgagac	atgtaaagaa	ataagaaaat	gcagtccata	cccagggaaa	aagaaaaacc
40321	agtcaataca	aactgttcct	aggccaggtg	cagtggctca	tgcctgtaat	cccagcactt
40381	tgggaggcca	aggcaggcag	atcaccagag	gtcaggagtt	tgagaccagc	ctgaccaaca
40441	tgttgaaacc	ccatctctac	taaaagaaaa	atacaaattt	agccaggcat	ggtggcgtgc
40501	acctgtaatc	ccagctactc	gggaggctga	ggcagaagaa	ttgcttgaac	ccaggaggcg
40561	gaggttgcag	tgagctgaga	tcatgccatt	gcactccagc	ctgggctaca	gagcaagact
40621	ctgtctcaaa	aaagaaaaaa	aaagaaaaaa	gaaaaaactg	ttcctgagga	agccaagata
40681	ctgactttac	tagaccaata	ctttaactat	ttttacatgt	tcaaaaagtt	aaaggaaatc

FIGURE 3-L

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40861
        ctcagaaata ggtcaattga atctatccag tctgaggaag agaaagaaag aggaatgaag
40921
        gaaaaatgaa tagagcctca gagactgtga gataccttca agcacgctaa tgacgcataa
40981
        tggcagtctc agaaggagag agggataaat gggctaaaat aatatttaaa gaagcaatgg
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41101
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        tccaagaaat ataaattcaa agagatcaag atccacacct agagataaca taatcaaact
41161
41221
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        agattaacag ctgatttcta tcagaaatca cagagttgag aaggcaatgg gatgacatat
41281
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41341
41401
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        tctaggacaa tggatatcca catgtaaaaa aaggaacttg ggcccctaat tcacatcata
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41641
        aaccataaaa tgacaagcca attaaaaaac atacaaatga gttaactgac atttctacaa
41701
        agaagatata ccaatggcca atatgcatgt taaaagatgc tcaacatcac tagccatgag
41761
41821
        ggaaatgtaa atcaaaatca caatgagata ctagtacatg cccactagga tggcaatgat
        aataataata ataataataa tgttattata atgaacaata caagtgttag taaggaaatg
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42121
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        ctaatgaatg gataaacaaa gatggtatat ccatacaatg gactgttact cagccataaa
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42241
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42301
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42361
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42421
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42481
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42541
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42601
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43021
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        acaaaccaac acaaccacac acaatcacac aacccctcca cctccaccac agtggaaatc
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        cataagaaaa cactataaga ctaccatgag tattaattgc agagttttta ttctcccagt
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43861
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43921
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        44281
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44401
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FIGURE 3-M

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44581
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44641
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44701
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44761
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48121
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FIGURE 3-N

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48481
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50461
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50581
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50641
50701
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50761
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        50821
50881
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        ctaagaggtt aaactggact cagccatgca tatagctgta atttattaca ggtgatcata
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        gttagaggca gttgtcagtc aattctaatc agaaacagat aaagagtgga atagcaccct
51061
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51121
51181
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        cataattcaa caggattata caaaactgtc aggagaaatt agctgatgta ttagatgtaa
51241
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51481
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        tcctgccctg tgtattgttt ccaggacatt cattagattc agggaaatga aatttaatag
51541
51601
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        aacaaattgt tcccttgact ttcctcaggc gaagaaagaa gaattattac caagaaaatg
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51721
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51781
        cagttqtcat cagagacacc ttggagtccc aggggacagt aacagcatca tggctgggat
        cacagcaaac cccatggggc taagtttctg agatccaggc ccaagaaata ccagcgtggg
51841
```

FIGURE 3-0

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52021
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52081
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        cctqtaatcc caqcactttq qqaqqcqqaq atgggtggat cacgaggtca ggagttcgag
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52321
        gcctgggcga cagagcaaga ctctgtctca aaaacaaaca aacaaaaaga agaagaaccc
52381
        aacctgccat tgctggtttg tgctttatta cctctgctca tagaagccat gagccatgga
52441
52501
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        aaaggaaaca ccttgatttt agcccatgag actgtgttga acttctgacc ttggaacttc
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52621
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        aatcttttac tattttaata gtgccatgag ttagaaaata aattgctcct ccaggacttt
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53581
        ccctgctccc aaagcatggt ggctaaagat gcttactgat ttaggtatac ggcatagaga
53641
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        gaaattatat tootgotaca taagaaacat atagaattoa gotatatago tgaattotat
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53881
        53941
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        attgtgtcat tgcactccag cctgggtaac aagagtgaaa ccccgtctca aaaaaaaaa
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54721
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54781
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        attcctgtgg gaaaaattat acttaaaatc atcccagagg aggacatttg taaactccta
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55321
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55381
55441
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55501
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        tgcggaagca ctgggtattt gcatctttgg atgagagaca tgagtgacag ggctgatgaa
55561
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FIGURE 3-P

```
55621
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55741
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55801
         agcactttgg gaggccgagg gggggagtgg atcacgaggt cacgagatcg agaccagcct
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55981
56041
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56101
         atcttcctcc ttaccaaaca ctgaatgctc agtttccttt cagatcctca cctcttccca
56161
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         gctcctcttg ctccaggctg taaaaatatg acctgtgtcc tgagctgctt ctgttttcaa
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56341
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56461
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56521
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56581
56641
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58321
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58741
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58801
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58861
58921
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59041
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59101
59161
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         taacagctac acatcatgca gagcttcctg ggctgtgcca agccctccgc atgtgctaat catctgcttc ataacgatct tatggaggag gttctagtac cctcatttta catagaggaa
59221
59281
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FIGURE 3-Q

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         59521
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         59581
         59641
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         59701
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         59941
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         60061
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         60121
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         60481
· / - - - 60541
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         60601
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         62401
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         62641
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         62701
         62761
         62821
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                  aattotoota atotoottat agaatgaato aggaggotat aaaattgota ocagaaacto
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         62941
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FIGURE 3-R

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63061
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FIGURE 3-S

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FIGURE 3-T

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FIGURE 3-U

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FIGURE 3-V

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FIGURE 3-W

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FIGURE 3-X

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88801
        ctaaatctgc tactcctctg ctctttctgt gccttatcta tccctgccga gtctaacatg
88861
88921
        cagattttgg tcattccaaa gtcatgtata gatctaatca cagggctctc tgcttaccag
        ctgctacttg gataaggaaa gcatgccaac acggtcctcc ttcttcatgc tggccaagtc
88981
89041
        agcatcatta ttattaccta agtttatttc taacacatct caatatcttc atgcactccc
```

FIGURE 3-Y

```
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89101
89161
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         ggggacttgc ctgtcctctc gcatgtgtga tctgagcttg tgtggatccc agagtgggca
89221
89281
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         accaaaaaac ttgcatcgta tttccaatct ccagacatac ttttgaaacc atttatctat
89341
89401
         ctggtgtgtt tatctgtatc tagtatgatg tgaatatgtg atttgtatgt gtgtctacca
89461
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89521
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89581
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89641
89701
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89761
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89821
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89881
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90241
90301
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90361
         tgtctggtta cctgcatgaa gtattctaaa ggaggaaaat agctcaaaga ggacattcat
90421
         gtgcactctg gcttccagtt ggccatttga gtaagtgatc gcaattaact gacgagcggc
90481
         agggaaacac ttcctggaat tctcatctac agacaagaac aaactggggc ggggcccatc
90541
         accttcacct acgcgccggg agggtggcgg ctggcgggcg gggccgggct cgggccgtga
90601
         cgccgagagt gcggggcgcg cggctgggag cctcgcgccc ccgcccgggc ccgccccat
         cccgcccgca tacagcccgc atcccgccgg ggaagcgagc ccagtccagc gctgcccgtc
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90721
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90781
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90841
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90901
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90961
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91021
         cataagtggt gtgaccagaa accttttaac aagacccgcc tgagcctgcg ttagagctcc
91081
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91141
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91261
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91561
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         gctggcgtgg acaccggate ggggcccgcc gccctggccc ggaccgcgca cggcccagcg
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91741
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         gaaagcgcgg cggagaagga ggctcgtccc ctccccggaa cgcctttgtt ccctccggcc
91801
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91861
91921
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91981
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92041
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         ccggctggag ggctgaattc gagtcgaaag cccgtgtcgg gctggaaaga agaaaccgcc
92101
92161
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92221
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         actotycotc atttcatttt gaatcotgat gtgacagagg caattgottg cttggatacc
92281
92341
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92401
         cggtgttggt tttcttaggt tatggatcat gttaaaggta caccgatgtg gtaaccgcac
92461
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92521
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92581
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92641
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         atcagcagca gacgttataa ctttctcaaa ataaatttat ggtagatttt ctatctggtc
92701
92761
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```

FIGURE 3-Z

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92941
         ctgaccette eeggeeetge aaggetetaa ggtagaacca gtgttateae aggaaaggee
93001
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93061
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         ataaagtgca ggccccatca agtaaaaaat gaaacattgt atttcattaa aatggtgatc
93121
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93181
         aaaqaaaact ttctaattct caaaaataga acagcttgaa taataactca tgggttttga
93241
93301
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93361
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93421
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93481
         aacaaaatgt cccctattca gggggaattt tatatatgct gaagtaaata gatctcagct
        ttgaattttt ataatacatt atgccttttc tgaaatattt ccatagccat tattttaatg
93541
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93601
93661
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         ccagaacagt gtaaatctag aattactttc cttacggtat gcaatatcta attattatgt
93721
93781
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         atcaggtgag atacaagatt tgaataaaaa agcgattttt tagaaacatt ttaattctac
93841
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93961
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        cccaaaagtt caagttcaaa atactgttct acagcctaag atccacctaa tatttcagat
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94081
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         gtaagttcaa ggatggactc acctcaagtt tccttctctt actttagagg accatataat
94141
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94261
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         attagggatg atacttctgc ctcaacagta tttgcgatgt gttaaatggc ccttagccat
94321
94381
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         tggtacatgg tttagagaca agtcgagctc atgtgactag taaatggaga ggcacagtat
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94861
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95641
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95941
96001
96061
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         tataacctat gcaatattcc catgtactct ttttttttat ttttatgtgt ttagagatgg
96121
96181
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96241
96301
        ggcccatgta ctttaaatca tctctagatt acttataata actaatgcaa tataaatgct
        atgtaaacaa ttgttacacg gtattgttta gtgcataatg acaagaaaaa aatgtgcatg
ttcagtacag acacgaccat aaatttttt ttcaaatgtt tttgatctgt agttggttga
96361
96421
96481
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```

FIGURE 3-AA

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qatttqtqqa tqaaqcccac ccaacataat gcaacatttc aaatgtatct tagtcagttt
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96601
96661
        aacgttgttc ttctagtgac tcaaataaag cagtcattgt gtctgaggag tcctagtggg
        gtggcagggg tggggctagg agtagtggct gtttgtagca tgttttatat cacattaaag
96721
        ggctgggtat gcattttagg caataattct tactcttatt gataggagaa cttgtatttt
96781
96841
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96961
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        97081
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97141
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97201
97261
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97321
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97381
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97561
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97621
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        gcatttggaa cagggcctgg tatatagtag acatacccat ggtagtaact gttgctagac
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        gccatgattg ccatagtgga atttaaagtc tttggactaa cactgaatca agaactaact
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100081
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        acagagcctg ggaggggag atttagcatg gccgctgaag agactgggaa agggagaagg
100141
100201
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FIGURE 3-BB

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        cagtgaagcc atgtaaacaa cttcctggct gataaggtgt cttgagtgtt gggagatcac
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100621
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FIGURE 3-CC

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FIGURE 3-DD

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FIGURE 3-EE

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FIGURE 3-FF

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FIGURE 3-GG

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FIGURE 3-HH

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· FIGURE 3-II

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127021
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127141
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127261
127321
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127381
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127441
127501
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         ttettteaaa tgeteteeet etttttacae acatacatgt acacacacaa teatactatg
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127681
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127801
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127861
127921
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128041 caggeteaag egattettet geeteageet eecaagtage tyggaetaca gyegegeace
         accatacgca qctaattttt qtatttttag tagcgacgga gttttaccac gttggacagg
128101
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128161
128221
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129241
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129421
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129601
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129661
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129721
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129781
129841
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         gacacaagat agtaattcaa atctataata aggaatgaag aaccccagaa atggtgaata
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129961
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FIGURE 3-JJ

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130561
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130861
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130921
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130981
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131041
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131161
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131581
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131701 -
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         132001
132061
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133261
133321
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133381
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133681
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FIGURE 3-KK

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133981	gcctgaccct	gcatccctcc	ttgacagcac	ttatatcagc	ttgtaacaca	tttttgtgtg
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134761	caaacccaaa	ccagctgata	cctgtccact	tctcagggaa	gtcactcggt	cagcaaaatg
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135241	cagccttata	gctaaatatc	tcttaggctg	gtctaaccat	agagaaatgt	aatcaatggc
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135361		agacattaga				
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136141		gtctccctct				
136201		aggcttataa				
136261		gctcagcaca				
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136381		agccacatgc				
136441		actgggaaca				
136501	gettettgetg	catgcgccct	tacccctagag	cctataaaac	cttaatataa	aatctggcag
136561		aattctggct				
136621	-					
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136861	gcataaggga	gtatcagttt	ctacagetea	acaatgagg	cattaatacc	ttcctcagag
136921	attatata	ggattataaa	tagatgacat	aattatotto	ctaataaaaa	tacagtagg
136981	actorataca	tggtaggggg	tataaaataa	ttattattac	ttaagettet	ccaaaaaaaa
137041	tcaaaaccct	ttgcctttat	atgagggaag	cactetgeaa	atatagtgct	tagtteteta
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137161	atccaactcc	acacagatag	aaatgggctt	cagttaactt	taatgggatg	tagtagaata
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137281	tttaatgcct	ctcgaacatc	ttttcacata	aagcactcaa	gcctctcagc	aatcacacaa
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FIGURE 3-LL

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139921
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        tttttgaaag gaccactccc ggtacagtgt ccagaataag aggaaatgca gggagactca
139981
        ttaagggget getgeaggaa teeageegag agataegget taeggetggt caccaaacta
140041
140101
        gctcctgact cgacccttct ctggattgtt cttccctggg tcatgcagag ctgagttcct
        gggtcacctc ctcacagcgc ttccctggcg actatatctt aagtcattct ctacaaccta
140161
        ttcgcccagt cacctaggcc ctctcccaca ctttaattct ttaacagcat tatctctatc
140221
        taaaaactat tttctttatt tactttaatg tagaattcct ccctcctggc tgggcgcggt
140281
        ggctcacacc agtaatccca gcactttggg aggccgagac gggcagatca tgaggtcagg
140341
140401
        agatcgagac catcctggct aacacggtga aaccccatct ctactaaaaa gacaaaaaat
        tagccaggca tggtggcaca cacctgtagt cccagctact cgggaggctg aggcaggaga
140461
        atagcttgaa cctgggaggc ggaggttgca gtaagctgag attgtgccac tgcactccag
140521
        140581
        tcactcccac caaaatgtaa gttccatgag agcatttagt aggcatgcaa taaatatttg
140641
140701
        atcaacaaa taaatgaatg agccaatgag ctacatgatg cggtgacctg cttggctgga
        actctqtqaa qcaatcaqca cagatqactq ccacattcca aaaggtctcc aggagcagag
140761
        agcccatgag cccccttgcc agccacacta agcatccagt gcatcactgc actgctttag
140821
        ctgtttacag taacacaagg agtcacggta actccaggtg cgtacatctt gcccctctct
140881
        taacttgcac tggtttatgg tttcaacaat ttccaaaccc ctttcctctt accctcccag
140941
141001
        tcattcacga agccccgcag ggaccgtcgc cttcttaatg cctttcaaat tctgacccca
        tetetgecae etcettqtea etqtetgete aggeeteatq getteteatg gggacaactg
141061
141121
        gtctccctgc ttttcttcag gctctccttc aaatcatgct ccagactgct gacaaaggag
```

FIGURE 3-MM

```
caattccaac atatcttatt gtgtctacat cactcccaag cttcaagccc tttcctgggc
141181
141241
        qcccaqqqtc ttcagqagca agcttaaact cttgagcaat gcacacgggg aatttcatta
        totageteat acctgggtgt geetgactta ccaagteete ttecaettee teaacteeat
141301
141361
         tctctqctqc aaccatacta attatccact tattgttccc caaatattca ggcagcttca
        ggcctccatc ccttctccac ctgctgtctg cctagaaagc ccatccttcc ctactccccc
141421
         tcacccatac tcctctgggg ccaactcgat ctaaatcata tttcagactt caccttctcc
141481
        agaaaacttt ctctqtqctt ctcttgatca gagcacctgc ttcattatgt tgtgaccact
141541
        tatctgctgc ctgcgctatg ccacagacac ctatggtcca gaaccagctc ttattcaact
141601
        gaaaacagtg catgctgcat cttaggtact tacaaataaa tgctgcacaa aacaaagagg
141661
        agtactggta tagaaacaag tgacacaaat caagtagtgg ctagttaaaa ggactgaggc
141721
141781
         aaaaataccc agaacacttg ttctaaacag caaaggccca ggtgcactgg ttaccacccc
141841
         tacaagatga ctgqaatact cattccctgg gcagtgattt ttttttttt ttttttttg
         agatggaatc ttgctctgta gctaggctgg agtgcagtgg cttgatctag gctcactgaa
141901
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141961
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142021
142081
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        ggcctcccaa agtgctagga ttacaggcgt gagccaccgc gcctggtctg ggcagtgatt
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142141
142201
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142261
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142321
         tgtaatgtta ataacaacag ctaacatcta ctgagagctt aacagatgcc aggcactgtt
142381
         ctgaatgctt tacatttgct tatttcctta actcttcaca acaaaccctt tgatacaggt
142441
         actigttttac caaagggaag tggagcacaa tggcccaagg tgacccaggt aggaaagaga
142501
         agaqccaqqc ttcaaaccca qgcagtcttg ctccaggatc tggctcagac caacatacac
142561
         agagaaaaat ggctgcactt gttctgccta aacttagaga cctcatttgg ttgctcgaac
142621
142681
         tigtctgact ttagtcaaat atagaaacat gagacttggc atgaaagtct ctgttgacac
         tttttttt tttaagtcca gctgcctaat ttattaagaa cagggcagaa ttttctgggt
142741
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142801
         ccctcaqcat acaqtatttc acccttcaga attttccaga agacatttga gatgttagag
142861
         ggaagatgtg tgtaacaggt ccaaatgggt ctagggagaa acgcccataa aggcaactga
142921
142981
         ggaggccggg cgcagtgggt cacgcctgta atcccagcac tttgggaagc caaggccggc
         ggatcacaag gtcaggagtt agagaccagc ctgaccaaca tggtgaaacc ccatctctac
143041
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143221
143281
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         gacaacaata gtttctgacc actgactact gaccaccaac catattgcaa gctgaccaca
143341
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143401
143461
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         agggtcatac agctggtact tgttagagcc aagatttgaa tccatcccta tccgacttcc
143521
143581
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         ctcctggtgc ctgcaaagaa atttatggtg aaacctccaa attgaagctt attttttag
143641
         tttatatacc tcccactcag gataaatagt catcaaaatc tccaaagtaa aaaagaaaga
143701
143761
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         tgaaaattcc agaaggctgg atcgtcaagt ttcagcttag aagttgcaat cagaaatctt
143821
143881
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         gtgcctacta gggaagaaag tggcgagaaa gcgagtgatg ctactctatc cgggaatcta
143941
         gaacaaaccc acagaggatc cacagggatg gagtgtgtgt atggggaggt gggccagatg
144001
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144061
         ttgtgccagt ctatctgctt ctctgtgtgt ttgaaaattt cacacatgta cacaaagcca
144121
144181
         tgaccetcca acaagatgac atcettagat gttaatggcc tgggttccat gccttcttag
         acacagcacc cttatgggga gaggtcaagg ctgaaatcag gtggttcctc caccctgtcc
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144301
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         gcagcaagtt ctgcttttat agaagacctt ctgtaagtgg ttgaaactac tgtttttcag
144361
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144421
144481
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         tgatgtcact gtgtggaata aggaagctgg caacacccca gagccagcgt gtggctgtgc
144541
144601
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         gattgtggcc agacacagtc ttgttccttt aacactttaa aggacaaatg gaaagattag
144661
         ccaagcccta atcatctgaa gaagccatgt gtctgagaag tctgagggaa gatatattga
144721
         aaacqatctc aqttacqatq aqacaqcttt gtttgattta cgcaaaggca gagacacagg
144781
         tgtactacat ccttcaggaa gcaagtttag aaataagatc tgcaagtcat aggatgtgac
144841
```

FIGURE 3-NN

144901	aggtctgcaa	atcctgcaag	tcacaggtca	tccacagtgg	gctagtctag	ctgcttcaag
144961		acgaaaggtg				
145021	aggtttcatc	cctaactctg	gtcagcaact	tttgaagtat	ataccaagga	ccacaagttc
145081	aaggaagtgg	gcagaagaaa	gaatgtgatg	cagtcatgca	gatccatcgc	cactattcaa
145141	gacacagccc	agagcgcctt	ccaagggctt	tctgttccac	tgagaataaa	attcaaatcc
145201		tctcagggtg				
145261	tttcctcctg	gcccacctgc	tctagcaatg	ttccttgaac	tcaccaagct	catttccact
145321	ttaggacctt	tgcacctgca	gctcgctctt	gctttgatac	tattccctaa	gtctttgcat
145381	gattacacag	atcaaacaga	tctcagacca	aaggtcgtct	tctcaggcct	ttccagacca
145441	ttctagctaa	agtagcatcc	ccagtcactt	tctattatat	cttgttttct	tttttatatc
145501	acttgttact	atctgatgtt	attatttatt	tgattgcttt	ttagtgaact	gtctctctcc
145561		aagctccatg				
145621		ataaggaata				
145681		tatàtatgaa				
145741		aatatagtat				
145801	tataaggttg	gggctgtcct	ggagaatcta	aggtatctag	tcatcatata	tatgaaattc
145861		ttgtttgata				
145921		gtcactggta				
145981		gatacacagc				
146041		caaccaacag				
146101		gtgtgtgtct				
146161		ttccaattcc				
146221		atctgtgctg				
146281		tctgagaaac				
146341		ccccaagacc				
146401	acttctctgg	aaagagacga	ctcagctttc	ttcatttgta	ataaaccaaa	tctgtaaaca
146461	cttaaaatgg	aatcatttct	aaatgctgac	ttgtgtgcgg	atctgggaca	ctgtttaatt
146521		actgtaaaat				
146581	catgagaaag	gagaaagctt	tgccaattct	gtgtagcaat	ggaactaaca	tggaccaatt
146641		aattgtcttg				
146701	tcctttgaaa	gtttcccatc	cttactacca	accccacaac	ccccagcccc	ctagtccagg
146761	ctccagggag	gagctcaagc	tgatgggtga	gcctctgata	taattgttct	ggtgagtgat
146821	gagcctgttg	tgaccttctc	ccacttggct	gctgaccacg	tgagagggca	gggctggtcc
146881	agagtcctca	cccgacctga	gcgtccaact	gcaactgtat	gttccggcag	ctttaatagg
146941		gcccgtatta				
147001		aagggcagga				
147061	tgactggaca	tgatccatca	ttgtccacag	caacctccct	cccagtacac	aaaaatgtca
147121	gaaagcaaac	ctggcttttt	tcctccagtt	ttttgtgttc	cttaagaaKc	tgctccacgt
147181	gcatcacgct	gtctccaatg	cctgtaaact	ctgcttgctc	ttccagcaaa	ttatccaggg
147241	caagcttagc	ctacaagaaa	cattagaaca	gtccagaagt	aaaccaacac	tcactcacct

FIGURE 4-A

>11:71972801-72105900

•						
1		ttacagtaac.				
61		acacgcagcc				
121	ctagccatga	tttcctacca	gggctgaggc	taatgtaaac	cacctgctca	gackcaagaa
181	gcaggaccag	agggtcaagt	tgctgagctc	tgaagtctgt	tctgaaaaag	cttcagtttt
241	aagtacagaa	caagtgatag	gccaaaggcc	agagggtctg	agctgcagca	gcactgctct
301	ccttaccccg	cccttggcct	gggtgccagc	tcctttgaga	ctgcctctta	gccacttact
361	gcccatcaag	ggaacaccag	acctacctca	agataacacc	aaagtgacct	ttggtcccag
421	agagttgtta	aactataccg	atctctcagc	tcatgggccc	ttgcttctgc	tgaaccctca
481	ttctcttagt	gctaactccc	actcccagaa	tttcagggcc	caaagcccac	acaagctccc
541	acctcaaagg	gtccttccca	gaaccccacc	cccttctcca	cctgatagtt	ccaaaggcct
601	acagcctcac	agctcacaaa	ggaaatggct	gccccatctg	tgcgccagtg	ctcacttgca
661	aaatttacca	ccacttaccc	tgagacgctg	cctgcctgta	gcctaagaat	tccatgctct
721	gtaccccttt	cttagaaaga	tactccccat	ctgagagaca	ctcacatcca	aagagtgaaa
781	accctgatct	tggggctcct	cctcctccaa	ctctRggacg	gataggccag	gaggcacatg
841	caagcaaaca	ccgagatctc	acctggcagg	ttacccagag	gggccaagcc	accttgccct
901	aggctaataa	gctataaaaa	cagcatagga	aatactttgc	tggtacatcc	cctgcctctg
961	agaagataaa	aggcaagagg	accagtggct	ccaagagacg	ccatacagag	aaaaacaatc
1021	tttctcaatt	cctggggagt	cctgggtaga	ccgtctggtc	caagtccaaa	gagtttcctg
1081		aaaccagttt				
1141	tcacacagac	cactccatct	ttgtagccta	gagtttggca	cagaacccca	aagccctgga
1201	gaggaacaag	ggagggatta	cagaggaaac	caagcttctc	tggtttcttc	aaaagtggct
1261	tacagatgtc	tgccccttct	ccccgttctc	tggagggtcc	agatcaggat	gatggcaaaa
1321	gagctgcaat	caggaaccag	acctgcaacc	aggcctgcag	ccatgtattg	tactggggcg
1381	cgtacacata	cacacaca	cacacacaca	cacacacaca	cacacacaca	cacacacaca
1441	cacacacaca	cacactgacc	tgggcccccc	accactatat	tcacacaccc	tggtccctat
1501	cagctgacaa	aatgaacctt	ttttcactgc	ccaccaccgt	gcacacaccc	acggcctcac
1561	gcagaaatgg	tgaagccctc	tcctgagctg	tctctacagc	tcaacgtgca	ggcaaacacg
1621	ctttccttct	ctgaacaaaa	acatgctgac	atctacgcaa	gggggaaaga	aagcaaccct
1681	ttgctctgaa	aggcgccaac	tcccggatgt	tggcaagctc	tgctccacag	cgcctgtttc
1741	tgagtatgtt	tacttgctct	ccctcttctc	tccctcccct	ttaaggatgg	cgcaggaaag
1801	ggaggtgagg	ggggagaatc	caccccaccc	cctcgtccat	gtttgaacaa	aaacccagag
1861	aaagagtgag	ggagaaaaag	tctcggtgcg	ggggggcctt	accagactcc	taaagccaaa
1921	cgtatctaca	ggttttaatc	cgccattagc	atttaaatct	tgaaaggaga	ggaggaaggg
1981	ggggccagtg	gaaagtaacc	ccacacacaa	aagaaaagtt	gttggttttc	ttctcagtct
2041	gcctggcagg	agcgatcttc	ctggctgaca	gccagaagtg	cgtcacagcc	aggagtctgc
2101	tttctttaaa	ggcacagcaa	gcttccccga	tctgggagcg	acagcaagca	ggggactctc
2161	agtgggggtg	gggcccagag	ggagggggtg	cactggagag	gaggggctgc	aaaggggaag
2221	gctggaggct	tggtccacga	acaagaaaag	caggacgaat	gggggcggcg	ggttgagggt
2281	gaaggcacaa	gcaggcaggc	aaaattactg	aactccaaca	gcagcaagag	ccaaggcaaa
2341	ctgtggcata	aacacacaaa	acacatctta	cagtggcctg	cctgacaaac	tgggatcaac
2401	cggacactcc	cccttcgctc	tgttttccac	ccagagttta	aggcagcagt	aataatctgt
2461	ccatctctct	ggacagcaat	ggaagggtag	gacaagggct	gtcctgataa	ttagatcagc
2521	ccctgcctgg	cggaccgcag	ggcaaggagg	aagacccggg	aacagaggct	ttgaagaaca
2581		aggccctctg				
2641	ctttaagtac	aaccatgcca	ctcacacaca	aagcgccctg	ccaccttcca	tgggcaccgc
2701	ctgccctgct	ctgggacacg	gccacccact	aaatccattc	cccgagggaa	tctctccagc
2761	ccataccttc	tgcgtggcaa	ggccaggatg	ccgtgctgtg	cccgctcctc	cccctccgcc
2821	acccaaacaa	gaagcccagg	cagattctgg	ccctggagta	caggcctgcg	ctgtcctgtg
2881	ctgcgtgcta	ttgtcggctg	tggaatggcc	gccaaaatcc	cagctgtgct	gccagaacct
2941	aatcccctgt	tccgctgagc	atttatgggg	aggggctgag	gggccaaggc	acgagaccga
3001		cactggctgc				
3061		atggctgaaa				
3121	ttccccccac	tgaatagcga	acttcaccaa	ggctgaaagg	gaagcccacc	agatggtcaa
3181	caggcacccc	ctaatcttat	gccacaaaca	tttactgagc	acctactatg	tgtaaggcac
3241	tcctatagga	aactgtagga	agtatacaaa	gatgaattaa	gcccagcatc	cgcactgagg
3301	taggttgtaa	ttcacaggag	ataagaaata	tgacttgaag	attaatttca	aactggtgtg
3361	ctaacttcca	taaaagctgt	aaagaaaaat	tctaaccagt	ttagaatagg	gaaggattac
3421	gaaaatgaag	tgccatttta	atttggacct	tgaaacacac	aggtagcatt	tccccagatR
3481		ggtgtgggga				

FIGURE 4-B

```
3541
         aagggcttga agagtgaggt ggggtcagag agctaggaga atcttgaacc tcaaaccaag
         gaatcaaaga cttgtaagtt tgtttgttat taacacagag ctgtggtatg acaaaaactg
3601
3661
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3721
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3781
3841
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         tttcatgaat aaaaaattag ccgggtgtgg tggcccgcac ctacagttcc agctacttgg
3901
3961
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        agacagggta aagaactgat aggaggcaga gagaggaact gtacagggga ggaaagtatg
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4081
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         agagtataat aaatagtagc tggtggggca cggtggctca cgcctgtaat cccagcactt
4141
4201
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4261
       . acacaaaaaa acaaaaacaa aaaattagcc aggcggagtt cttttttttt ttttttttt
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4321
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4561
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4681
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         aattagtgtc ttttttagtg tcagagtccc agctactcag gaggctaggg tgggagaatt
4741
         ccttgaactc ggaatgagca gagatcatgc cactgcactc cagcctgggt gccagagcaa
4801
4861
         qactctqtct caataaatac ataaataaat ggacagatag ataaacagag agacagaaag
4921
         acatatagta gctaatgctt actgagtgca tactatgtac gcgacactat tctactgacc
4981
         taatatgtac gaactcatta atcttaaaaa ctcccttaat gaagtaggta ccattatcac
5041
         ccaactttag agaggaggat attgagccac aagattaaat aatttgccaa gatcacatag
5101
         caagtaaatg gcagaagtct ctaccacatg ctgctaacta tttgacattg gcaagaaact
5161
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5221
5281
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         tccaagcaga agttggctca ccaattgttt gggaagccag agagggtatt ctgcctggag
5341
5401
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5461
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         atttaacagt taacaggggt tactttgggg gggggggagga gttagattgt agggaacatt
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5581
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         ttgccctgtc acccaggctg gagtacaatg gcatgatctc agctcaatgc aacctctgtc
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5701
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5761
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5821
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         ggtgataaga aaaatgtaac tacctcctac tcttggcact tatgtgtata tgcatgaaaa
5941
6001
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6061
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6121
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6241
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6301
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6541
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6661
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6901
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6961
7021
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         gcagaatttc cacagccct ctcacagcct agacaggcag caggcggcca catggctcct
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7141
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7201
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FIGURE 4-C

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 7381
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 7681
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 9781
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         10681
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 10921
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FIGURE 4-D

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11461	tgtgctaggg	atttgaacaa	acttcaggat	ttttaaggaa	ggctgtgtct	cacatctcaa
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11581	gtaaggctca	gtaaaaagaa	aatacctgcc	tcaaggtcga	ctggtaaggc	tgcagagcca
11641	gaactcaaag	agatgtcttc	taaatccagt	gctctctcca	gcacatctca	gctacatcct
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12241	cctactaact	gaaatttatc	ccttttaagg	caaagetett	ccttatatc	addacatatt
12301	ctccaaaata	cataagatat	gttactcttt	acttagaatt	adigadatti	aaccagggac
12361	attcgactat	aaacatgata	taaacatcct	acatactgtg	ctaggaatte	atagtagast
12421	tttttttt	ttgagacaag	gtctcactct	getgeedagg	ccggagtgca	targatara
12481	ctcagctcac	tgcaacctcc	acctcccagg	ctcaagtgat	acttttata	tttttataa
12541	aagtagctgg	ggctaccggt	gtgcaggacc	atgeecaget	taractorra	castosacco
12601	gatggagttt	tgccatttgc cccaaagtgc	taaasttaa	cicadacici	actataceta	accessaget
12661	accttggcct	acttgagttt	tyggattaca	agracagaga	acceptetet	aaccataata
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13321	gcattctagg	cagagaaaac	agcacatgca	aagacagacc	atattacagt	tgaacaatgg
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13921	ctaagattac	aaggtctgaa	cttaagacaa	cctaatacaa	attctgggtt	tatagcttaa
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14401	aaactatata	ttttaaatga	actctattta	aatgtaacct	ttatatagaa	ccccaggaca
14461	cacagaagaa	gacagtttga	agtaagggat	atttggagac	ttgttccctc	rgcttccccc
14521	tggttcttaa	gtcagttcta	tagttctgta	aagctttaca	gaatgcagtg	taaaaaccat
14581	tgtctgttac	aagcaagaag	taatgtatgt	cigaagtaag	ycaatgacaa	radayatyca
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FIGURE 4-E

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18361
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FIGURE 4-F

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18601		ccgggaggtg				
18661		gagcgagaca				
18721		aagctgggtg				
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18901	actactaggg	aggctgaggc	agaagaatca	cttgaaccca	ggaggtggag	gttgcagtga
18961	accaagatta	tgccactgca	ttacagcctg	ggcaacaaga	gcaaaactac	atctcaaaaa
19021		aataattaat				
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19201		tatttttgtg				
19261	tattattat	tgtttttaga	aaactaggtt	taaactttac	acattactct	gcaacttatc
19321		atttatcaac				
19321		tacataaaag				
		atggctattt				
19441		caagttaaag				
19501	tgacgtattt	ttactcctgg	totostosto	attectacat	coettactca	gagaatcatc
19561	catgttttga	agtgtgatga	cccaccacc	accectace	agaatgtcaa	gagaaccacc
19621	ctcagggtcc	agtgtgatga	cagagagcaa	agtaatttgg	agaatyttaa	terateret
19681		ctgttggtaa				
19741	gcacatgcta	tcccctcct	ccccttacat	gtgeteeetg	coctogtoco	ageageegee
19801	tccaactcaa	ctgatgtgag	cacagetage	tacittgtca	cactcctaai	cciggcaagi
19861	gcagacaggc	ccaggagctc	tccaaacaat	tggaaaggag	aaggaataca	ttatcactgt
19921	gaaataatat	aatacggagg	tatctagagt	aaaatgtaaa	actccctctt	cattaagcct
19981	caacccacat	ttgccagtga	cactccccag	ctcagaagtg	accactgtta	gaagtctgtt
20041	gtacaacctt	ttggattttt	cctaagcatg	tacacataca	ggtatatatt	cacatacagg
20101	tatgtgtgtt	tggtctacat	atctgtaatc	ataccatata	atatgttctg	caacttgccc
20161	ttttcatgta	Maaatttatt	tgacatgttt	ccataccagc	aaaaaacaga	ttcctcacat
20221	ttttaattaa	tttttttga	gacaaagtct	cactctgtca	cccaggctgg	agtgcagtgg
20281	caccatcatg	gctcactgca	acctcaacca	cctgggctca	ggtgatcctc	ccacctcagc
20341	ctcctggtag	ctgggactaa	aggtgcgcac	caccataccc	agctaattta	tttgtagaga
20401		ccatgttgcc				
20461	ccttgtcctc	ccaaagtgct	gggattacag	gtgtgagctR	tcatggctgg	caattcctta
20521	aacttttaaa	agcttRaaaa	aatcctatgt	aagaatgtgc	cacaacttta	ttttcccatt
20581	ttgctacatc	tggacattta	ggttgttcac	agtgttttgc	atgtcaaaga	atgctgtatt
20641	gataacactg	gcagcacatc	tctaatttta	cacacaagct	aatatttctc	taggatatat
20701		agaattaatg				
20761		atctaaaact				
20821		cccttctacc				
20881	tttaatttat	atcttatttc	cagaaaagtt	aaacatctcc	tcacatatgc	aactgttcat
20941	tcttatttct	tatgaaaggt	attaccattt	tgattttaaa	catgagggtt	cagagatgct
21001	agagtgacac	aaccagtaag	tccagacatc	aaagctgttt	ttttaacaat	ttcccatcaa
21061	aactaggcct	ctttctgtca	agtgtaattc	cccctaccag	cagccagcaa	actatggcct
21121	ataagttagc	agcccatatt	ttgtaaatca	ggttttacta	aaacgtagcc	acgcccattc
21181	atttaagtat	tgtctatggc	tgcttttgtt	ctccaatggc	agaggtgagt	agttacaacc
21241		caaagcctaa				
21301	ctaagcacag	tgactcacac	ctgtaatccc	agtgctttgg	gaggctgaag	gtggtggact
21361	gcttgctgtt	tgagcccagg	agttcgagac	caacctgggc	aacatggcga	gattccatct
21421	ctacaaaaat	tagaaaaata	gccagttgtg	gtggcatgca	cctgtaatcc	cagatactca
21481	ggaggctgag	gtgggaggac	tgcttgagcc	tgggaggcca	aggccgtggt	gaactgccat
21541	tgtgccacca	cattccagcc	tggaagacag	agtgagactc	catgtcgaaa	aaacaaaacg
21601	cacacacaca	aaaaaacaa	gagttaaaaa	ctaaagaaaa	gctcaggtct	gggcacagtg
21661	gctcatgcct	gcaatcccag	tacttaggaa	ggcttagcga	gaccccatct	ctacaaaaaa
21721	taaaaaaaat	taggctaggc	acggtagccc	acacctgtaa	tcccagcatt	ttgggaggcc
21781	gaggcgggcg	gatcacgagg	tcaggagaat	cgagactgtc	ctggccaaca	tggtgaaacc
21841	ccatctctac	taaaaataca	aaaattagct	ggccgtggtg	gcgtgtgcct	gtaatcccag
21901	ctactcagga	ggctgaggca	ggagatcact	tgaaccaagg	agttggaggc	tgcagtgagc
21961	cgagatcgtg	ccactgcact	ccagcctggc	gacagagcaa	gactgtctaa	aaaaatttaa
22021	aaaattaaaa	attagccagg	cacagtacta	tgtgcctgta	gttccagcta	cttgggaggc
22081	tgaggcagga	ggaccccttg	aaccaaggag	ttcgaggttg	cagtgagcta	tgatcacacc
	J JJ - 1 J J - 1				_	

FIGURE 4-G

```
22141
        cttctcaqtq qqqattaqtt atggtctaat tggccacagc cagagcatgg ctatgttaca
22201
        gtgtgtggct cattttcaaa taactttata tgcagtatag gtctggtata taatcccaaa
22261
        ggaaagagcc caaaacactc aaatgaagtc aaaagactta tctttactta tgggttgcaa
22321
        22381
22441
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        cacagtttac cacagcetca aceteccagg ctcaagegat ceteetteet cagacteetg
22501
        agtagctggg accacaggca ggtaccacca cacctggcta atttttgtat tttttgtaga
22561
        qacaqqqcct tqtcatqttq cctaaqctca tctcaaactc ctqqqctcaa gtaatcctqc
22621
        ctctgcctcc caaagtgctg ggattatagg catgagccac catgcctggc cccttattta
22681
        atttcatctg gttcctactg tccttcaatg attttgacaa tgtagttcct acccacacac
22741
        cacaataata caaaaccaaa qcaaactcca ctatgtctgc tgctaaacac ccccaacaaa
22801
        cacacataca catcacacca caccacacaa cacaacacag gtgtctcctt cccttttgct-
22861
        aqcagattcg ctaggaagca gctgcacatt tccagcaagt cgaacaaact gctgagagct
22921
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22981
23041
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        tacggcaggc aggaaaggtg tcatcctccc catatcatca gtggaggaac tcagtgtaac
23101
        ttgtttcatt tcctcttact tcaaaaSgtc attttaagta atagggtcat ttaggtaata
23161
        tcagtgatct ttttaatttc tcctcgcatt ctctcccaaa ttttggtttt acaaaataat
23221
        ggttaaaaaa aaaaagctat catactctcc acgaaattta acttaatcta gaattttgaa
23281
23341
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        aatcccagca ctttgggagg ccaaggcgag cagatcacct gaggtcagga gtttgagacc
23401
        agectggeca acatggtgaa accecatete taettaaaat acaaaaaagt agetgggtgt
23461
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23521
        ctgggaggtg gaggttgcag tgagccgaga tcgtgccatt gcactccaga ctgggggaca
23581
23641
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        caggtattaa gtggttctct ggataggaat ttggcaatac aaatcaaaat taatgcctat
23701
        aatcctagca ctttgggagg ccaaggtggg cggatcacct gaggtcaaga gtttgaaacc
23761
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23821
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        aggatgatgg gtgtgagcca ctgcacccag cctaagatag taaattttgt tacatacatc
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24541
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        ctgtcatccc agcactttqq qaggccaaqq taggaggatt gcttgagccc aggagttcaa
24601
        gaccagcctg ggcaacacag tgagaccatg tctctacaaa aaatttaaaa attagccagg
24661
24721
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        agtotgagec tgggaggetg aagcoataat aagctgtgat cataccactg cactotagec
24781
24841
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        aaaaaaaaa totcatgtto tttcatcaaa taattccaat cacagaaata aaagtttagg
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        aaataatctg aaatacaaag atatatggac attaatagaa ttatttatca ttctgaaaaa
24961
25021
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25141
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        agaccagcet gggcaacata gtagacteca ettetacaaa aaataaaaat aaaaaaaata
25201
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25261
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25321
        cagcctgagt gacagagcaa ggccccgtct ctggggaaaa aaaaaaaagt tttaaataat
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25441
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25501
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25561
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25621
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25681
        cactgaagcc tgggtgagag agtgagaccc tgtctcaaaa caaacaaaca aaaaaaaggc
25741
        aggataaaac tattatggta tggccccatt tttgaaacta tatatacaaa tatttataga
25801
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FIGURE 4-H

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25861
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         tgggtgcctt ttactttccc ccttaacaca ttatttttca tgttttctaa atagtaccat
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26041
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26101
         atgtatcata agaaaataac caaaaacgta gacaaaaact tatgcataat aatgttcata
         taaagataca cagaaaacta ttaataaata atggttactt ctgcagggca gaattagggt
26161
26221
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         cattattatt tgaaaaaacc tgaaagcata taaaaaatcct atatgataga ctattatqca
26281
26341
         gccactacaa atatttatga agagtatata taaatttata taatgaaaaa atggtaaatg
26401
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26461
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         agatagtggg attacgggtg atttcagttt tcttccttat acttctctgc gtttttcaca
26521
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26581
26641
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26761
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26821
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26941
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         gcactttggg aggccgaggt gggcggatta cctgaggtca ggagtttgag accagcctga
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27061
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27121
         cgggggttgc ggtgagccga gatcacgcct atagcctggg caacaagagc gaaactctgc
27181
27241
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         gtctgtaaat caaaaacact taacagctaa ttacatgaag aataaaatcc aaatttctta gcataacgct taaggttctc taagatccaa ccctcaaatt tccttcccag cctcatcttc
27301
27361
27421
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         ttccaagetg tgtgcctttg cccatggtgt gacctccatt aaatgccctg tctcctaaac
27481
         ctactgaact cctattcttc ctttacaacc tggctcaaat gccttctccc aaactctcct
27541
         tategecece accateagga acaattgtte titeetetat gtgeteceat attgettgtt
27601
27661
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         tttactaaac tcctggaggg cagaaaccat tttaaaatca tttccactcc agcacactgc
27721
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27781
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27841
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27961
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28021
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28141
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28261
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28381
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28441
28501
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28561
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28621
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         ctcttaactc tttcaatata aaaatgagga aaacaatgtY tagagtaaga aagagaattg
28681
28741
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         ttaactgatg agttttcaag accactgttt ccaggaacag gttacagggc actacaatat
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28861
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         ttcctgccta cctttttca aacccacaac tgctaacaac aacaaaaaaa tcaatgtagt
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28981
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29041
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29101
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29221
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29281
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29401
         aggctgaggc aggagatcg cttgaacccg agaggtggag gttgcagtga gctgagatcc
29461
         cgccattgca ctccagtctg ggtgacagag agagaccctg tctggRaaaa aaaaagaaaa
29521
```

FIGURE 4-I

```
29581
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        cactataaag gaaagtgact tgttttccag cagacatttc taatcttatt aaatcaaatg
29641
29701
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29761
29821
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29881
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         ctacctctga ggatattcaa aagattggct cagaggcagt ctgaggcaat gacaccatca
29941
         ccaaaggaaa tctaaaggct gagaacacaa ttactttgaa ggggtcaaac ttaaaaaacat
30001
         tctaattgcc ccataattac aatcaagggg gcaagacatg tacaatatct gtcacatttg
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30121
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         agaattagtt tccacctagg gaaggggcaa agggacagga atgattattc attcccctaa
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31081
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31141
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31861
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32341
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         agaactgttc aaagttaaag cagactaaag acatgatagt catgacaact aagtgcataa
32401
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32461
         gggaaaagat gagaaatctg aacaagtatt atatactgga tgtattgaat caatgttaag
32521
32581
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         ttqctqaaat aqqqattaaa taacatgata tttacatcta acagtcaaaa agattcagaa
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32701
32761
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         aaaataattt agtaaggagg gaaatcctgt attatatact tttttatata ctcagctctg
32821
         tgacagatat aataggcact cattacttta ggtatctgct cactacctaa ggaaactggg
32881
         catttggagg tcaRcaatca gacagagtcc actttgctgc agctcatgag gggtatagta
32941
         ggaaattett agggaataag aggtttetee aaaacteaca ttgtcacace acaggaaate
33001
33061
         tagaaaagca ggcaattacc tcactcctca ttgaggccat cacagaagta caggcactga
         acaaatgccc actogctagg cagaatgcag ctgctgccca cacgttagta cccagtggta
33121
         aggtggatac aatgtgacct cagaggacca agagttgagg tcacattgca tccaccttgc
33181
         caccqqqtac caaaaatttg acaatctgca aaacaagtgt ctctggccag tcacaggaag
33241
```

FIGURE 4-J

•						
33301	gcactcaagt	atcaaataaa	catgcctgaa	atatatgcag	tċtttcctcc	tcaccagata
.33361	aaccagtcct	cagctgcaat	aaggcagaag	aaatctgcaa	ggctgaatca	ctggtatttc
33421	ctgtgcagac	ttcaaagaaa	ctggcccttc	aataggacag	aaagggcagg	cgacacagct
33481	gccaacagag	gcctcaaccc	aggagcatgc	tatgcaataa	tgccttctct	cccttctaca
33541	gccatcagat	acctcatttt	tacttctgcc	aaatggcccc	ttattaccgc	gactgattac
33601		accctttacc				
33661	ctttctagac	agctcctcct	ccaatttgcc	agaggaattg	tcaaaactat	tcccctggcc
33721		gctcacgcct				
33781		gatagagacc				
33841		tggcgggtgc				
33901		aacctgggag.				
33961		acacagagcg				
34021		aatggcttac				
34081		tcaggtgttc				
34141		aaaattagcc				
34201		actgcactcc tgcccacagt				
34261 34321		tctgacagag				
34321		tatgccccac				
34441	ccaatgacca	tggcaaaggg	tctagaagta	tatcatttca	aatatggagg	aagaactaca
34501	cacttttage	caggggagaa	caagaaaact	tttttcaaat	atacgcatag	ctttcacata
34561	gatgaggaga	aagacttatg	agtccactat	aagaatacaa	aaccagaact	aatgagtgga
34621	agttacagga	agactgattt	taatttacca	cagggaagaa	atttcagcat	gttgtagaag
34681	ttcagaatgt	gggatgtaga	acccagaatg	cttggattag	gatgtcaact	ccaccactta
34741		ggctttgggg				
34801		ataatagaac				
34861	tgcggtggat	caggcctgta	atcccagcac	tttgggaggc	tgaggcaggt	ggatcacctg
34921	aggtcaggag	ttcaagacca	gactggccaa	catggggaaa	cccgtctcta	ctaaaaatac
34981		agctaggctt				
35041		tcgcttgaac				
35101		ctgggcacca				
35161		cctgtaatcc				
35221	tgggaggtgg	aagttgcagt	gagcagaaat	cacaccactg	tactccagtc	tgggtgatag
35281	agagaggctc	catctcaaaa	aaaataaaaa	gaagtagttt	ctgtaaagta	cttagaacag
35341	tgcctagttc	acaatatacg	ctggaaaaaa	aatgttacct	attgctatta	ctaaatgttg
35401	atacaacaga	ccaggctggg	tgtggtggtt	tgtgcttgta	atcccagcac	tttgagagaa
35461	ctgcttgagc	tcaagagttt	gagaccagcc	tgggcaacat	agtgagacct	cgtctctact
35521		agagttgcca				
35581		gaggatagct ccagccagag				
35641 35701		ctcacgcctg				
35761		agttcgagac				
35821		agctggttgc				
35881		tcacttgage				
35941	gcactccagc	ctgggcgaca	gagtgagact	ccatctcaaa	ataaataaat	aaataaataa
36001		taaaaataat				
36061	ctactaaata	tgcctagaag	tgctcagaaa	aatataataa	acatccttct	agactgtgcc
36121	agctattaag	gtattgtctc	tcagctccaa	atctaccctg	ttatgctccg	ctttgtgatg
36181	ctggggcctg	gactccacta	aaccccattt	cacatttgcc	agctggatcc	ctgtcaacag
36241	ggggtgctaa	ggggaaaaca	gaagacaaga	gaaggctaca	agggacttcc	tccttcttgt
36301	agcctggtgt	ttcttgacaa	cagaagttgg	ttcttcccag	ttgcYttcta	aactcccaaa
36361	accagcctcc	tgcccctcaa	aggcaccagc	atcagctaag	taaggctcaa	cagaagccag
36421		ttcctcctat				
36481		gggtacagct				
36541		ctttgtttt				
36601		ttaatattcc				
36661		ggagttcact				
36721		aaactgagct				
36781		ggattagcga				
36841		aggttcagaa				
36901		gattcttaag aataaaaaac				
36961	cccayagaga	aataadadC	Ligititiget	cacciagiga	yaaayyayyy	aaaaaccycc

FIGURE 4-K

```
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37081
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37141
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37201
37261
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37381
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         37681
37741
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37861
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38161
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38581
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39601
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39661
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39721
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39781
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39841
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39901
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39961
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40021
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40081
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40201
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40561
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40621
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40681
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FIGURE 4-L

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40861
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40921
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40981
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41041
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41101
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41161
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41221
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41281
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41341
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41401
        cqcqccaqcq ctqtqaqcqc acaattagtt taaactatgg ccccgccccc tcgcgctgcc
41461
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42361
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44281
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44401
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FIGURE 4-M

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46561
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46801
46861
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46921
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        tcccagcatc agagtgagat gggactacaa tgttataggc aaaaagagat ggatacaggg
46981
47041
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        tatctggaaa agaaaggctt tatagaagag gctacactag aactgagtgt tgaaacatga
47101
        gagagtattc actaagtggg cagctgttac ttggaactgg atgcaggctg gtttaccaca
47161
47221
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        ggcttcattt cttctggtca ggcacagagc agcaagcacW caacaaatgt ttgctgaatt
47281
47341
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47461
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47581
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47641
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47701
47761
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47821
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47881
        tgttgtctgc ctgtagattt aatatctaaa agattcaagt ctccctaatt gacaatccat
47941
         gcccatggga ccagttcata acagaattaa gctgtgaagt gactcaatct gtcacctccc
48001
48061
         caaaqctcaq ctggtactgc tatttttca gaacaagaca ttcattttcc tctaaaccta
        ctaaacttga tccatgtata tgttaaattg ccaaaaaagg aatttacatg aactgtatta
48121
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FIGURE 4-N

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48361
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48421
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48481
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48541
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         tctaatctgc actgtccagt atggtagcca ctagtcacgt acatttgaca ggtaggctag
48601
48661
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48721
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48781
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48961
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49021
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         tcagctctct tcatcccagg tgagtagtat tctcatggct ctcccttgtc tccagaaaaa
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49141
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         tgcaagtgac tgataacaac attgtgttca tccctgtcag ggagtatttc cattttaacc
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49261
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49321
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49381
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49441
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49561
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        aggicticaga gtaggattica ggagattatg actgcagtict acaactgact cactggctta actctgggca agtcctttta ccccttgggt ticagttict tcatctggca tittccagac
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49681
49741
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         tagaaagtgc tctatacatg caaggatgca aggaagagtg atttcatatc ttaaaatgga
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49861
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         gaaacctgaa agccggtgta cttgaaacac tggtctttct ctgtcctccc aggctgaacc
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49981
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50041
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         tcattcaagg tcagcccca gagcacagta ctccactcac taaggcagca ggcccagtgt
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50161
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50341
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         catctttaaa agaagccagg ctacagcagg aaagtcaagt ggaagaaaac tgggaagcca
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50461
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50581
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         acttactgac aaatttctta cactcattcc agccaaatcc aagtttattc catcatcacc
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50701
50761
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50821
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50881
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         tctcagaact attatttggc tttagtcttc tctcaggcaa ctggtagcca ctgcctttaa
50941
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51061
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51361
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51421
51481
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51541
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         catctaatct gtgctaccat caacccagtt cctctaactt ttcacaaacc tagagtgtta
51661
         aggaagtccc ccaccatata cacctaccaa caccttccag ttggtggttg agggatgaca
51721
51781
         cagggaagtt caatcaaact aacttgtatt ctgacacatg gcaagagcta catggcagcc
         tttcagagag aggaaaacag gaacatagtt tcccagatct tcctggagct aaatgctccc
51841
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FIGURE 4-0

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51901
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51961
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52021
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52081
        caagttttag gcaactctgt cccaccagtg attccctctg agcttggcct ccaccccatg
52141
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52261
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52381
52441
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52501
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52561
        ctcattttga aaaagtggga gtgaggcttt ggggtgttcc atacaccggg gttctaacat
        aatcctattc cctattctct ctcctcctca gccaaacttt ctgaggatgt tgtttatgct
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52681
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52741
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52861
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52981
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        ctctttccct aacttgtatg ccttctatgc taatgattct caagtctgtg tctcctgagc
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53281
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        caaattggtc atttggtcca actcactccc taaaatccat attccacact gacacttaag
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53461
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54541
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54601
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54661
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54721
54781
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54961
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55081
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        55261
        aaaccaacaa acaactggta catcagaggc tgaagtaaaa ttStaactgt cactgcgcac
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55441
55501
        ctcaatttaa ccagtatttt aaaagcttct tatgtgccta gcatgatgct ctgtcttcct
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```

FIGURE 4-P

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55621
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55681
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55741
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55801
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55861
55921
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56341
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56521
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56821
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        ctcagcctcc caagtagctg ggactatagg cacctactac cacgcctggc taattttttg
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57121
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        atteteaatg actatgaaga cataceagge tetgteettt tggcccccae cccatecetg
58501
58561
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58861
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59041
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59161
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59221
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59281
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FIGURE 4-0

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59341
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59461
        aggaggggta tetgggaggg aaggteteag eteateaeag acteaateta ggeeeatete
59521
        ccttggcctc agYgccctca agagtgtcac agggtaaaca gggctgacat gaataactac
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FIGURE 4-R

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FIGURE 4-S

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70441

FIGURE 4-T

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FIGURE 4-U

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FIGURE 4-V

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FIGURE 4-W

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85261
         attacagtgc tctcctagtt ctgctgtcca tggacggtgg tgtgttagca gctcagttgg
85321
```

FIGURE 4-X

```
ccccttgcat cgtctcatgg ggtggttgcc ctctgccagc aagggcaaag agccagtgtg
85381
         acageettte tgggtaeeca caettggtgg gteeegagee ettggeeagt gteeaagaag
85441
         aatgaggttg tgcagacaat tgaagaatga tgaaggtgga gaattttatt aagcaatgaa
85501
         aacagctctc agcagaaagg ggagctggag aggaaacagg aagggccagt catcttcccc
85561
         cgaaqtcagg ccatctcttc tgtagtccag ccatctcttc ctcaaagtcc ggttgtctcc
85621
         tcgaagtcca gccatcttcc catctactga ctgagtctgg ggcctttata tgcacaggac
85681
85741
         ggggagtgca tgctgattgg tttgtgagta tgcaaaacag gttaaagtga agacatcact
         caaagatggg catgacagtg tagaaaacca attaggaaag ggtaagtata tgtaaaatag
85801
85861
         gtgaagggtg gggatcaatc agaggaaagc acaacaaatg ggaagacaag tcttcaatct
         ggtctgagga tttagcttgt agcttggctt tcaggcttta aactggcttt ggcttggaag
85921
85981
         tggggtttca ccagggacca gtccctattt gcctaggcat ttggctgcct cctgtccctc
86041
         tcatttcccc ctctgaagag gtacaactac ctgttgttag aatagggaca aagacaatct
         taactacttc ctgctgacag gggatgctgt tttgagcaaa cagcaatcag agctccctca
86101
86161
         gaggeetate taagegteee aggttaaagg gageeateat teaaggetet gtteggaatt
         tgatggcctc taagtgagaa gaaacagttt gggttattag atgacatgga tcaaaatgga
86221
         acaacaagga ggtaaagaca gctcaaaaat cccaagtctg ctgacatgcc cagataacta
86281
86341
         gtggctatag ttatgcctgc taagatttgg atgcatggtg cttggctttg gtttgctccc
86401
         ttqttttcat tttcccaaaa aaacctccag-attatgagca ccacatccta tttactccta
86461
         tcagctgcag gataattgcc cagaactaga atattgattc atattttac attacccatc
86521
         ccctctattt cttctgagct acaaccagag atcactagtt ggttcacagg aataagcagg
         attaatctaa aatgtaggca aaagcttaaa aacaactgaa actagaattt aatgacaagt
86581
86641
         gtatgataaa ttttgaaaca taatttttct ctctccagtc ctcatttctg ttaaaaataa
         accatgatag gactgagttg tttgcaaaat aaactttagt cttatacttg gcctggtcat ttgcataaag tgcagcaaga ataatcattt tcacataggc ttttaaaatt ggctttgatg
86701
86761
86821
         gaactctgtt tcacaaggaa tctcaggtag gaccttttaa agctgagctc agccatgggt
         ttgtaccctc aaatacctat gagttgggta aattcttctt ttcttgaggt cccagataac
86881
         acagggetet tgggeetgtt agaaaatgae attetetaet caccacaggt taggaaceet
86941
         gtccagggac tgtgtagaca aggtatgagg ccagttttcc caaggggatt ttattggctc
87001
87061
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87121
         ataaccggtt tctccagtta tatcctgctg caaaagaaaa tagattctta ttgcactgat
         gcaaataact atattgccat aagttaagaa tatttgcaaa tagtttccaa attctagaga
87181
         aaccaggcag agagaaatat gctccaaatt ttcttcacag gagtatacct tactcaattg
87241
         ttaaaagctg tagatagctc aaaagaagtt tccttgactc tggaaaaaac aaaacaagga
87301
         tcagcaatgt tttaagcaaa aagttaaaaa ggattacttc agttttctat tagttcagtt
87361
         tattcagtta actcttgttc tgcttgatat tcaggagaat ttcagctctt tatgactcct
87421
         gtatgttttt cctctgttcc aatgtcacaa tctccaaagt catcagaaac ctgcatttga
87481
         gggcaccttt caaagtccaa tagctgtcca caaatcatct tttgaaaaagg gtcaaaacaa
87541
         gacaacaatt gtctgtgaat gacaaaatat ccttgggtag tcacagtcaa aaacacaatt
87601
87661
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         ttactgatag catatactca gacatttgag ttttagaagg cccatacaat taggccgggc accatggctc atgcctgtaa tcccagcact ttgggaggcc gaggtgggtg gatcatgagg
87721
87781
87841
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         aattagctgg gcatggtggc acatgcctgt agtcccagct actcgggagg ctgagggagg
87901
87961
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         tagcctggta acagcgcaag actctttctc aaataaatcc catacaattt tggaacatat
88021
         attaatatta ttcactaaaa tataccctga agaaagtcat acattatttt tattttggca
88081
88141
         atcccatqta actaaatqtg ttaaataatc ctgtttacct ctcttttgga tgctccaggg
         gccttcagta gcatccaaaa gttaggggtt agaaaagaca accttgaacc tgaagtttga
88201
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         tccagatcac cataagttat ttattttagc caaaatgatg actcaaaaat tttaaaaacaa
88321
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88381
88441
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         tcttagcaat ttttaatttt aatgtaaaac ctggtaagtt tttttaatta tgtactaggc
88501
88561
         acagataaag totgactott tacaacatag ttaatggtgt ggttaatoca tatgaccoca
         gaccttacca aattgtaaag ctggcaagtc aaacagttct caaaagccaa agaagcagtt
88621
88681
         tataacctta caacatttag caaacctagt atctgacctg catacattag accacatatt
88741
         ttcattttga taacatttgt attttaccaa ttatcttcaa aattgttttt ctttctcaaa
         gattaaagtc acatgaacta aaaggcaata cagcttttgt ttttccttca aaaaatattt
88801
         gatctaagca cttatttct ttaagcaaat tagagctctt tttttatata aacatcacac
88861
         acaaataaca catatgtgat tacacagaca gaagattcag tagttgtaag atttttcatt
88921
88981
         tgccaatctc ctaattggat tattggcctc agggtggagc atttcaagaa gcagagctag
         gaaagcatgc agtttccagg gcctaataaa caggcatagc tggaagacaa aaacagattt
89041
```

FIGURE 4-Y

```
tgaaaggggt ctatctgctt ttaattcctg gggttctata agaaaaacag agttttttt
89101
        ttttttcca aaatqqqatc cgtggtgact tctctgtttt tcccaaggtg tcttatgctc
89161
         tcagaagtta tcttagggcc tctcatgcat gcgttaagag tgacaagaca aattggggaa
89221
89281
         aaataattca gttgactgag aaaaaattgt tttgcagaga aacaagatcc atgaagaaaa
         aaacacaaag gccttttaaa tatacctata gcttggatat ccacttttaa ttaagctgag
89341
         cactetttaa gataaceett ttaaateeet tagtaeeeaa etttageeat gecaageeae
89401
         gaatatttct ggcttttgaa ctttaccatt tctttcaaca ttttgcacag ggagagagag
89461
         gccagaggcc cgactggcag aaaactttta cccttctgtc cacatgttca caattctttc
89521
         cccttctcac tccatcctta ttccactctc agccttcctc atctcagtaa atagccaagc
89581
         actectetet aattgeteag accaacaca tetggagtea teetaattee teeettete
89641
         tcatgtcctc catctcagca aatcctatca aaacatcctt caaaagacat gacattactc
89701
      _ ctcccttttc accacgtcca ctgccaccac atagccctgg ttcaagtcat ggttgcctta
89761
         aggetgggee atteacatag acatetgtgt caattgtttg ettteeettg teectagagt
89821
         cagatcagat gctgaactgg aaaaagcaaa taaagtttcc atttcattca gagtaaaatc
89881
         ccccatcttt getgagtetg aaccaegggg ccctgaagat etggeetgga ccccacacet
89941
90001
         geogetecca geteactget ggecacactg geetectect egetgtttgt teetgaaatg
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90061
90121
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90181
         gcctgcttca gttttcttca gagcacaatc atcatcttta tttgttttct gtcgtctctc
90241
90301
         tctaacaacc tcccacccc aaactagaat gtcagctcta tgacagtagg gacttttct
         tggtcacttc tgtagctcta gaacccagaa cagcctagca catggtagat gcccaataac
90361
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90421
         catcccaggc ctggacttgt gaaacagctt tctaactggt ctaccttgcc caattccagc
90481
         ctacacgtaa tcccatctga acacaccaag actgccaatt gaactgtgac attcccctgc
90541
90601
         ttaaaactct ttcactgtga ccagttgtag aaacaacatt ttgtttatcc atttatccat
         ccgtggacac ttgggttgct ttcaacittt agctatcgtg aaitaatgct gctgtgaata
90661
         tgactgcaca gatagctgtt tgcatccctg ctttcaattc ttttgggtgt gtgcgcacaa
90721
         gaggaattgc tggatcatat ggtaattcta tgtttaattt tttttcacag catctggacc
90781
         attttacatt ccccctccac tagatatgtt attatataca aaggtggacg gctatacaag
90841
90901
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         aataatgaaa tagaatcata tagatctatg tacacagata agggaccatc tatagtacat
90961
         tctgttaagt aaagcaagca aagtgagctg ggcacagtgg ctcatgcctg taattctagc
91021
         actttgggag gctgaggtgg gaggatcact tgagcccaag acgtcaaggc tgctatgacc
91081
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91141
91201
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         tggtgccatg gcatccagag aaagaacatt ggtggggata ctgatgaaaa agaataaagt
91261
         ttgtagatta gttaaaagta ttcccttaat gttaatttcc tgatttttta agtaattggg
91321
         ctttggtttt gtcagatgcc aacatttggg gaaactggat gaaagcatat gggaaacctc
91381
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91441
91501
         aaatcaaata aacttgatgt cttaaaacaa taccaattag gctgggcgca gtggctcatg
         cctgtaatcc tagcaatttg ggaggctgaa gtgggccgat aacctgaggt cgggagttcg
91561
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91621
91681
         gcatagtggc atgtgcctat aatcccagct acctgggagg atgaggcagg agaatcactg
         gaaccggaag gcagaggctg cagtgagctg agatcacacc actgcactcc agcctggggg
91741
91801
         acagagcaag actotytoto aaaacaaaac aaaacaaaaa cacaatactt atttacttat
         acttcaagat tttgtgagtt taattatact tcaagatttt gtgagatttt gcccaagaat
91861
         ttgggcaaga ctcatgattg gcccatcttg gccgggcgtg gtggctcacc cctgtagtcc
91921
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91981
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92041
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92101
         ctgcactcca gctggggtga cagagtgaga ccctgtctcc taaaaaataaa aaataaggta
92161
         aaataaagat tggcccatct accctcaaca gttgcctgga ctccctgggg ctcagtgcac
92221
         ctagatgctg gactcggata accatctgat ctttgatgta gtggacagac actttgttct
92281
         tgccatcatc tttggtacct gagatagaaa gccttaaaga gaggccacgc ccatgattaa
92341
         gtttcaggtc aaaacaacga gcaaaaaggc aacggctata gttgtaggtg tagcaaatca
92401
         gtgtgccttt tatctagagg ctactgaaaa ccagacattc attaaagata ttctggtcac
92461
         ttggatgaag gctggccttg gcattcacct gaatctttag tagagtcttt agcaccattg
92521
         gcaactcagc cagacctggc cttggccacg atagtggagc ctgggattgg agggcatgaa
92581
         ttttatgaag cctgtaatat cagaaattcg ttggttgagg acatacctct ttctttttgg
92641
         accetgtggg cgtaatgcta ttgatacatg tgcagaggag gaattaatat gactgtgatt
92701
         gacagaataa ttatgaagtg caaagacctc agatctgtga tcagcttcca tagaagtatt
92761
```

FIGURE 4-Z

```
tqctcaqaaq cttctcaqaa acattctcat gattgaagaa gccttgaaga gcccgtattt
92821
92881
        ctgtctatga aatctcctgt ttattgtact atgaggaccc atcagaaagt aactgaggta
        gtgctgattt cctgagcaat tattcagtcc actgtctcaa atccatcatg cagaatgttc
92941
        93001
        aaqattaata tgataagtac tctgtttttc ctgggaattt tgttgtagaa agagtaactg
93061
        ctgtgtggct aaactaaggt tataagccaa attgtttcct cagagtttaa gaaacacaat
93121
        actaactctc atgggtttac tagttgtctg ttgctgcata acaaatcatt ccataatttt
93181
        gtggtgtatt gctgcagaca atgttaaact aagtggatga aaaggatatt cacatagtct
93241
93301
        cagagtgtct ccctacaagg taggattact aacaaaggga aactaataat tatatagtaa
        ggaaatctcc ttaacccaat aatcaccagc aataagatgc agcaaccctc atcatgtacc
93361
        tcttgatatg atgcactgac aaaagcacct ctcttctcta attttcttgc caaaatgcat
93421
93481
        aaqctcaaqc taattacaqq aaaatataga caaacccaaa ttgagggaca ttctgcaaaa
        taactgaaca gtaattctcc aaaagtgtca aggtcataaa agacaaagac attgaggaac
93541
93601
        tgtcacagat tggagggaga ctaaggggac atgacaacta catgcaacct ggaatcatgg
        actgaatcct qqqccaqaqa aaggacattg ggggggaaac tggtgtaaag ggcataaagc
93661
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93781
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        ttgacgatgt tttgcagttt ttctgcaaat ctaaaattat ttcaaaacaa aaagtttaaa
93841
93901
        aatcaaatac acatagttgc ttgaaatagt aactatttta ttatattcca agatgttgtg
        agtcaggaat ttggccaaaa ctcaggtggg cgattcttct gcaaagaccc ccacaacaca
93961
        ttcaaagtca caggcagagg ttgttggggg agggcattga aaagaagaga agagtcatag
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94081
        ggagccctgg ggaggcaagg gcttcataac tagacactgg tcttgtcacc tcagactcac
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94201
        ctgtagcagg accagatact gaggtcagac tgaaaacaca ggctctgcct caggagaggc
        tctctactag ctgagtaaat gatgacagta ttggaaatgt tcccaacatc ataatgggaa
94261
94321
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        agtagcagtt ctactgcctc caagagtgtt ggagaaatac aaaccaagca ttaggcactt
94381
        ttaacttgaa aacatgaagt tetetteet aactttett gttteettat ttettettet
94441
        94501
        tottottett ettettette tttettette tteteettet cettttett
94561
94621
        tgctgagaca gggtctcact ctgacagtac agtggtgcca tcacagctca ctgcagcctc
        gacetecagg geteaageaa teeteecage teaceeteec aaatggetga aactacaage
94681
        tcgcaccacc atacgtggct aatttttcta tttttgtgtg cagatgaagt tttcctatgt
94741
        tgcccaagtg gtctcaaact cctgggatca agtgatccat ccacctcaac ctcccaaaac
94801
        gctgggatta caggtgtaag ccaccacac cagcccacta actttttat atcggctaat
94861
94921
        gaaatagttt taagtttaga ccctacgagg cataaagaaa taattttagt tatgttatca
        gatgtacagt aatactcaag tgtgcaactg tggataactt gagttcatga ggtttttgtt
94981
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95041
95101
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        atgtatgtcc agggaccaga actcttggtg gcttcatgtt catacttttg caagcacatg
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95221
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        acatattatc aagtcagaga ggtcattctg tgtcttagta ttttcacttc atatttggta
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95341
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95401
        ctctactgcc aggtgaccat gttattaatt tcttttcata ccttgccaca gaattttcac
95461
95521
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        ggagtgcagt ggcgtgatct tggctcactg caaactcctc ccgggttcaa gtgattctcc
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95641
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95701
        ctcaagtgat ccgcctgcct cggcctccca cagtgctggg attacaggcg tgagccacca
95761
95821
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        ttacatagca tttttctgca cctttctttt tccacttaac aatgcacttg aagattttc
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95941
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        atgtaccata atttaactgg gtccttattg aaagacaatt gagctgtctc ctagacaaag
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        ccttgtgcac cttcccKaac agagggtcta accaagcagg caggatgggg ttataaagta
96061
        ggtggggagg tgggagagac tccaccttcc caggtgggct gagaatggag gtaaggccct
96121
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96181
        ctcgctcagc cccctcctcc gtttgccgct gacctgttgg cctcccccaa cctctgagcc
96241
        tgcctctgcc taggtaattt cccaagaccc agaaggggtg aagggtgagg tgtgattgcc
96301
        cccacctcct tgcctcccgc agcatctgct ccgggaccat gaacaatagc tgacagctcc
96361
        atggcccttg ctgtccccat ctcagcttcc ctgggcatct aaacctcagY tgccatgggg
96421
        taggaggaca ggctgaggaa gcagaagcct gaggctgtct agagtctcac tcctgcatca
96481
```

FIGURE 4-AA

```
qcaqqccacc acctqtqqtt cctccttqtq caaatttqaa aagaattqca taaaacactq
96541
        gagaaatcca agaggggaag tccacaaggg cggtggctcc ctacaaggtc acagagcaag
96601.
96661
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96721
96781
        gcagggtggg gacagcagag atctgggcct gggagggaga gagtacacaa tcacatggct
96841
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         acatggcctg gcagatgatg cagctgctgc ttctggcttt ggtgactgct gcggggagtg
96901
        cccaqccaq qaqtqcqcqq gccaqqacqq acctqctcaa tqtctqcatq aacqccaaqc
96961
97021
         accacaagac acageceage ecegaggaeg agetgtatgg ecaggtgagg geageetggt
97081
         qtaqqacaqc atqcacacag gtcagagggt gatggcacga gcaatggcag gtccagtgtg
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97201
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         aggagtgtgc ttgtatttca ttcctctggt ctcctggcct gctccctaca aggtttcaca
97261
         ttcccagagg gctggggatg tgcctaggga gagactgtgg cgtggacaca atctgtgggt
97321
97381
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         tttgcttatt tttaaatcgg ggttaaaaaa aaaaaacaaa tacataacat acattttcca
97441
97501
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        ccatcaccac catccatctc ctgacctctt tcattctcca aaactgaaat ggaaactctg
97561
         tgcccaccac ttcatttgct tttcagaacc ttctagagca catcctcctt gccaggaaat
97621
97681
         qqtqtqqatq taqacctttg agagagacag atgactatca ttctcagggc catgagctat
        atgagagtga tgatatttgt tgagccctta ctatagcaag ggagttcttc tcattgtact
97741
97801
         cagtaactct tttggaggca acaacccttg accctgacag gcaggaccca tgtctgccaa
        accetaagae ceatgatgtg caaggggtet tgcaggaaga ccaagagttg gaacatecaa
97861
         ggaaaagcaa gtgtgaagtc gggctggcag ggaagcatgt tctgtgtcag ccggcactgg
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        qcqtqqqcca qqgtqtqqqa gqtgqqtagq tctqqctccc ctcccatgqa tttccctatt
97981
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FIGURE 4-BB

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FIGURE 4-CC

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FIGURE 4-DD

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FIGURE 4-EE

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FIGURE 4-FF

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FIGURE 4-GG

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```

FIGURE 4-HH

	122581	ttaaagaagg	tacacaaatt	atgaatagtt	acacgaaaag	atgctcaaca	ttattaatca
٠	122641	ttagaaaaat	ggaaactaaa	accatagtga	tagacggttt	tatacctact	agaatggcaa
	122701	taataataat	gataggcaat	aacaagcatt	ggcaaggatg	tggagaaatg	ggaaccctca
	122761	cacagtgctg	gtggggatgt	aaaatggtac	agcccttcgg	aaaacagtgt	ggcagtttct
	122821	caaaaagtta	aatgtaaaac	tgccatacaa	cccaaaattc	cactcccagg	tgtctactca
	122881	ggagaaacga	aaacaaacat	aacaaaactt	aaatatgaat	attaataata	atcatattta
	122941	tgtatgtaaa	tatgatgtat	catttatgta	tgtaaatatg	atatatcata	ttatgtatca
	123001					tagcagctgg	
	123061					caatgaaacg	
	123121					gaaagaagcc	
	123181	ggcttcatgt	ggcatgattt	cacttacatg	aaatgtgcag	ggaaggcaaa	tttatagagg
	123241	cagaaagtag	attagtagtt	gcctggggct	ggaagtgaca	acagggatta	attgtaaatg
	123301	ggcatgaggg	gggataagaa	ttgaggggat	gattctgagt	ttctgtgggg	tgtatccatg
	123361	agggaaagta	ttctaaggaa	attggcatgt	ggctccataa	aaatctatca	tctgagacaa
	123421	actccattcc	catcatgaac	tttaaaatat	tggttggaag	ccaagcatgg	tggctcatac
	123481	ctgtaattcc	agcactttgg	gaggccaagg	caggtagatc	acttgagcca	gggattctag
	123541	aacagcttgg	gcaacatggt	gaaaccccgt	ctctacataa	aaatacaaaa	aatttagccc
	123601	agtgtggtgg	tccacgcctg	tagtcctagc	tatgcaggaa	gctgagatgg	gaggatetet
	123661	ttagctcagg	aggtagaggc	tgcagtgggc	tatgactgtg	ccactgcagt	ccagcctggg
	123721	ttgatagagt	gagaccctgt	ctcaaaaaaa	aaaaaaaaa	aaaataggaa	ttgctggatg
	123781	gtaatgttgt	aggagtttct	cctcagttca	gccaaagaca	gggtccttgt	ttaaaaaaa
	123841					atggaattta	
	123901	aaaaaaagcg	gggaaacggg	gaccctcggc	agagtgagag	tcctgctagt	acacgettee
	123961					aggggccagg	
	124021					gtgtgcgggt	
	124081	ttetetgggg	accccttac	acceggerge	ccacccc	cctctcaaga atctaaactg	agtacatcaa
	124141	actactgtta	gaacaayyat	aggggtgagg	acgaagaccg	tcagaagcct	atctaagggt
	124201 124261	tagagagaga	gracecate	ttccaacact	cagagetece	gaccatttgg	actttaataa
	124201	cctggcaga	aggegeeate	aaccaggtta	ttagaaaaca	tgtgttaaaa	cassacsaca
	124321					tttgcacagg	
	124441	ccaaaaaccc	gactggtaaa	aaaaacttta	cccttttacc	agcatgtcat	acttataaat
	124501	tecetteete	tgagggaaa	cctaagccaa	ccagctgaag	gtttgggåaa	ttaactcttt
	124561	ccagtttgga	ggatgcatct	gagggagtg	tcctatagta	caaagacaca	attacctatt
	124621	agtgaagaga	agacagtaga	gaagaaagga	aaaaaaggtg	ctttttaaag	gagtcccagg
	124681					atggctaccc	
	124741					ataccagggg	
	124801	agagaaggaa	gagcgtcctc	tttccctctt	ctgtccttgc	atacccaagt	cctggtgacc
	124861	ttggcaggtg	ctgccatggg	tgccacagca	gcttgcaccc	atgaagcagg	gagtacctag
	124921	agaataggaa	ttatcagcca	gactcagtgg	ctcacgcctg	tacaacccag	caccttggga
	124981	ggccgaggtg	ggcagatcat	gatttcagga	gtttgagacc	agcctggcca	acatggtgaa
	125041	accccgtctc	tactaaaaat	acaaaactta	gctgggtgtg	gtggtgcatg	cctgtagtcc
	125101	cagctactcg	ggaggctgag	gcaggagaat	cacttggtcc	caggaggcaa	aggttgcagt
	125161	gagccaagat	cacaccactg	cactccagcc	tgggcaacag	agtaagactc	catctcgggg
	125221	aaaaaaaag	agagaatagg	aattatccgc	tcttacctat	gtttctatac	cccctacagt
	125281	cagtagtctt	ggagtttcct	agacctcatt	tatgctgtgg	ggaaaagcaa	gagagatcag
	125341	attgttactc	tgtctgtgta	gaaagaagta	gacataggag	actccatttt	gttatgtact
	125401	aagaaaaatt	cttctgcctt	gagattctgt	taatctataa	ccttaccccc	aaccctgtgc
	125461	tctctgaaac	atgtgctgtg	tcaactcaga	gttgaatgga	ttaagggcgg	tgcaagatgt
	125521					gagtcatcac	
	125581	tctcaagtac	ccagggacac	aaaaactgcg	gaaggccgca	gggacctctg	cctaggaaaa
	125641	ccagatattg	tccaaggttt	ctccccatgt	gatagtctga	aatatggcct	cgtgggaagg
	125701	gaaagacctg	accgtccccc	agcccgacac	ccgtaaaggg	tctgtgctga	ggaggattag
	125761	taaaagagga	aggaatgcct	cttgcagttg	agacaagagg	aaggcatctg	ctcctgcct
	125821	gtccctgggc	aatggaatgt	ctcggtataa	aacccgattg	tatgctccat	ctactgagat
	125881	agggaaaaac	cgccttaggg	ccggaggtgg	gacctgcggg	cagcaatact	tttagatta
	125941	gcattgagat	gcttatgtgt	atycatatct	tatataataa	cacttaatcc	acasttatat
	126001	ccatgatgca	aagacctttg	ctcacgtgtt	ageococc	ccctctcccc	acaattytet
	126061	cgtgaccctg	acacatcccc	atactacta	tactacccaca	gatgatcaat tggttcccag	anteceetts
	126121	yyaactcaga	tatactttat	ctctctctata	ttttctttc	caaatctctc	gtcccacctt
	126181	acqaqaaaaa	cocacacact	tataggggg	acceaccect	acatatgcca	tagatactea
	126241	acyayaaaca	cccacaggig	cycayyyyda	acceaecee	acacacycca	cygulaciay

FIGURE 4-II

```
catgacettt atccatgaaa tgggaggett ggettgattg geaggaatta gecatgetea
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126421
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126481
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126541
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126601
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         ttctcctgcc tctacctccc aagtagctag gattacaggt gcatgccacc atgcctggct
126661
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126721
126781
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         actgtgcccg gccttgcact gtgcctttta acccctgtta tcatctgcct ctgaatccct
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126961
127021
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         ccagataatt ggtggctata gttatgtaag ctaggatttg ggtgcatggt gcttggcttt
127081
         ggttagctct tactttccaa aaaaggaaac ctccgattaa tgggcatcct atttattccc
127141
127201
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         cattaccat cototoctto tttotgaget geagetggag attgetggtt ggttcacagg aacaaggagt gttagcctaa aaatgtagge aaaaacttaa acactaatga ctttagaatt
127261
127321
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127381
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127441
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         tggctttgat ggaactctgt tcttcaagga atttcagaca aaacgtttta aaactgagcc
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127621
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         ggctcacacc tgtaatccta gcaccttggg aggccgaggt gggcggatca ccggaggtca
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127801
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         attagctggg tgtggtggca agtgcctgta gtcccagcta tttgggaaac tgaggcagga
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127921
         gaatcacttg aacctgggag gcggaggttg cagtgagccg agatcatgcc actgcactcc
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         atttccaaat tctggagaag ccaggcagag agagagaaaa atatgcttca aattttgttc
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128221
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         tetteatgag teetgtacat ttteetttat teeaatatea eagteteeaa agttateaga
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128521
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128581
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         ttttttttt ttccgagaca ggatctcact ctgtcaccca ggctggagtg cagggatgcc
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         caaatggctg ggactatagg cttagaccac catacccaac taatttttgt atttttgtgt
128881
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128941
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129061
129121
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         gtctcatctt gtagctccca taactcccat gtgttgtgaa agggacctgg tgggagatga
129181
129241
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         gatctgatgg ttttaaaaac gggagtttct ctgcacaagc tctctctttg cctggtgcca
129301
129361
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         ccatgtggaa ctgtaaatcc aataaacctc tttcgtaaat tgcccagtct tgcatatgtc
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129541
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129601
129661
         acttgttgaa gggccttgac caaaagcctg atagtgatat ggacaataag gtccaggctg
         aggtggtctc agatgaagat gaggaacttg ttgggaactg gagcaaaggt aactcttgta tgttttagca aagagactgg cagcattttg tccctgcct agagatttgc agaactttga
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129781
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129841
         attattatta ttattattat tttgagatag agtctcactc tgtcacccag gccagaggac
129901
         agtagcgtga ccttggctca ctgcaacctt cgcctcctga gttcaagcgt ttctcatgtc
129961
```

FIGURE 4-.I.I

```
- 130021 tcggcctccc aagcagctga gataacaggc atgtgcctcc atgcctggct aatttttgta
  130081
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  130141
           atgatccaac tcagcctcct gaagtgttgg aattacaggc atgagccacc acacctggct
  130201
           gcggaagaaa tttctaagct gcaaagcatt caagaggtga cttgggtgtg gttaaaggaa
           ttcagtttta taagggaagc agagaataaa ggttcagaaa atttgcagcc tgacaatgcg
  130261
  130321
           atagaaaaga aaagccaatt ttctgaggag aaattcaagc cagctgcaga aatgtgcata
           agtaacaaga ggaacattaa cccccaatac aatggggaaa atgtctccag ggcatgtcag
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           aggtettett ggeageeet eccateaeag geeeagagge etaggagaaa tggtteegtg
  130441
           agccaqqtcc aqqqtccccq tqctqtatqt agcctagqqa cttqqtqcct tqtqtcccaq
  130501
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  130621
           aaagcccag tccttggcag cttccacgtg gtattgagct tgcaagtgca cagaagtcaa
  130681
           qaattqqqqt ttqqqaacct ccacctagat ttcaqaaqat qtatqqaaat qcctggatgc
           130741
           qqaaqqqaaa tqtqqqqttq qaqctcccac acaqaqtcct tactqqqqca ctqcctaggg
  130801
  130861
           cagctgtgag aagagggcca ttgtcctcta gccccaagaa tggtagatcc actgacagct
  130921
           tgcactgttt gcctggaaaa gctgcagaca ctcaatgcca gcctgtgaaa gcagccggga
           gggaggctgt acactgaaaa gccacagggg cggagctgcc agagaccatg ggaacccacc
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  131041
           tcttacatta gtgtgacctg atatgagaga tggagtcaaa ggagatcatt ttggagcttt
  131101
           aaqatttqac tqccctqctq qattttqqac ttqcaqqqqc ctqtaqcccc tctqttttqq
           ctaatttctc ccattttgga gtggctgtat ttacccaata cctgtactcc cattgtatcc
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           aggaagtaac taacttgctt ttgattttac aggctgatag gcagaagtgt cttgcttttt
  131221
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  131341
           ggggactgtt gggaaggcat gattggtttt gaaatgtgaa gatatgagat ttgggagggg
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           acagggatgg aatgatatgg cttggctgtg tccccaccca aatctcatct tgtagctccc
  131461
           ataattcact catgttgtgg gagggacctg gtgggagatg attgaatcat gggggtgggt
           ctttcccatg ttcttgtgag agtgaatggg tctcacgaga tctgatggtt tttaaaacag gagtttctct gcacaagctc tctctttgcc tgctgtcatc cacataagat gtgacttgct
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  131581
  131641
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  132061
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  132181
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  132361
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  132481
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ggggaggtgg gagagactcc acceteccag gtgggctgag gatggaggta aggecetgca
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  132661
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  132781
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  132841
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  132961
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           ggccaccacc tgtggttcct ccttgtgcaa atttgagagg aattgcataa aacactggag
  133021
  133081
           aaatccaaga ggggaagtcc
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>1:23174301-23174600

1	agttggctgc	cacagcctct	gccaagcttt	gtctttgggg	cttgctgcag	aaacctggcc
61	tacggaagat	acgacaccac	tgggagggtt	gtgtaggtgc	caggggacca	tcgtggtict
121	ctagggcgct	gtggaaattg	ggtcttgggc	tgggtggcat	ctggcagtca	tggRtaacac
181	ttgcttttcc	agttaatgtg	gccatgtgat	tccaagtgtc	atgttgcttt	gtggcaagat
241	tgttgtġtga	cttgttttt	tgtttttgtt	tttgttttt	taaaggaaac	tatttgtggg

FIGURE 6-A

 NM_000201 [gi:4557877] Homo sapiens intercellular adhesion molecule 1 (CD54), human rhinovirus receptor (ICAM1), mRNA

qcqccccaqtcqacqctqaqctcctctqctactcaqaqttqcaacctcaqcctcqctatgqctcccaqcaqcccccq qcccqcqctgcccgcactcctggtcctgctcggggctctgttcccaggacctggcaatgcccagacatctgtgtccc cctcaaaagtcatcctgccccggggaggctccgtgctggtgacatgcagcacctcctgtgaccagcccaagttgttg qqcataqaqaccccqttqcctaaaaaqqaqttqctcctqcctggqaacaaccgqaaggtgtatgaactgagcaatgt qcaaqaagataqccaaccaatgtgctattcaaactgccctgatgggcagtcaacagctaaaaccttcctcaccgtgt actggactccagaacgggtggaactggcacccttcctcttggcagccagtgggcaagaaccttaccctacgctgc caggtggagggtggggcaccccggggccaacctcaccgtggtgctgctccgtggggagaaggagctgaaacgggagcc aqctqtqqqqqqqcccqctqagqtcacqaccacqgtqctgqtqagqagagatcaccatqqagccaatttctcgtgcc qcactqaactqqacctqcqqccccaagggctggagctgtttgagaacacctcggccccctaccagctccagaccttt qtcctqccaqcqactcccccacaacttqtcaqcccccqgqtcctaqaqqtqqacacqcaqgqqaccqtqqtctqttc $\verb|cctggacggctgttcccagtctcggaggcccaggtccacctggcactgggggaccagaggttgaaccccacagtca| \\$ tqtqcaqtaatactqqqqaaccaqaqccaqqaqacactqcaqacagtqaccatctacagctttccggcgcccaacgt qattctqacqaaqccaqaqqtctcaqaaqgqaccqaqqtqacaqtqaaqtqtqaqqcccaccctaqaqccaaqqtqa cqctqaatqqqqttccaqcccaqccactggqcccgagggcccaqctcctgctgaaggccaccccagaggacaacggg $\verb|cctgtatggccccgactggacgagagggattgtccgggaaactggacgtggccagaaaattcccagcagactccaa|\\$ tqtqccaqqcttqqqqqaacccattqcccqaqctcaaqtqtctaaaqqatqgcactttcccactgcccatcqgggaa tcagtgactgtcactcgagatcttgagggcacctacctctgtcgggccaggagcactcaagggggaggtcacccgcga qqtqaccqtqaatqtqctctccccccggtatgagattgtcatcatcactgtggtagcagccgcagtcataatgggca ctgcaggcctcagcacgtacctctataaccgccagcggaagatcaagaaatacagactacaacaggcccaaaaaggg accccatgaaaccgaacacacaagccacgcctccctgaacctatcccgggacagggcctcttcctcggccttccca tattqqtqqcaqtqqtqccacactqaacagaqtgqaaqacatatgccatgcagctacacctaccggccctgggacgc cqqaqqacaqqqcattqtcctcaqtcaqatacaacagcatttggqqccatgqtacctgcacacctaaaacactaggc gtctagcctgatgagaggggaagtggtgggggagacatagccccaccatgaggacatacaactgggaaatactgaaa cttgctgcctattgggtatgctgaggcccacagacttacagaagaagtggccctccatagacatgtgtagcatcaaa acacaaaqqcccacacttcctqacqqatqccaqcttqqqcactqctqtctactqaccccaacccttgatgatatgta tttattcatttqttattttaccagctatttattgagtgtcttttatgtaggctaaatgaacataggtctctggcctc acggagctcccagtccatgtcacattcaaggtcaccaggtacagttgtacaggttgtacactgcaggagagtgcctg gcaaaaagatcaaatgggggctgggacttctcattggccaacctgcctttccccagaaggagtgatttttctatcggc acaaaaqcactatatggactggtaatggttcacaggttcagagattacccagtgaggccttattcctcccttccccc tqtctgqacatgagtqcccagggaatatgcccaagctatgccttgtcctcttgtcctgttttgcatttcactgggagc ttqcactattqcagctccagtttcctgcagtgatcagggtcctgcaagcagtggggaagggggccaaggtattggag caqqctqqaqtqcaqtqqtqcaatcatqqttcactqcaqtcttqaccttttqqgctcaagtgatcctcccacctcag

FIGURE 6-B

NM_001544 [gi:12545400] Homo sapiens intercellular adhesion molecule 4, Landsteiner-Wiener blood group (ICAM4), transcript variant 1, mRNA.

qctqqqacqccqqactaaqcqgqcqcaaaqccccaaqqqtaqccctctcqcqccctccqqqacctcaqtqcccttct gggtgcgcatgagcccggagttcgtggctgtgcagccggggaagtcagtgcagctcaattgcagcaacagctgtccc cagccgcagaattccagcctccgcaccccgctgcggcaaggcaagacgctcagagggccgggttgggtgtcttacca gctgctcqacgtqaqqqcctqqaqctccctcqcqcactqcctcqtqacctqcqcaqqaaaaacacqctqqqccacct ccaqqatcaccqcctacaaaccqccccacaqcqtqattttqqaqcctccqgtcttaaaggqcaggaaatacactttq cqctgccacgtgacgcaggtgttcccggtgggctacttggtggtgaccctgaggcatggaagccgggtcatctattc $\verb|cgaaagcctggagcgcttcaccggcctggatctggccaacgtgaccttgacctacgagtttgctgctggaccccgcg|$ acttctqqcaqcccqtqatctqccacqcqcctcaatctcqacqqcctqqtgqtccqcaacagctcggcacccatt acactgatgctcqcttqqaqccccqcqcccacaqctttqqcctccqqttccatcqctqcccttqtaqqqqatcctcct cactqtqqqcqctqcqtacctatqcaaqtqcctaqctatgaaqtcccagqcqtaaaqggggatqttctatqccggct gagcgagaaaaagaggaatatgaaacaatctggggaaatggccatacatggtggctgacgcctgtaatcccagcact ttgggaggccgaggcaggagaatcgcttgagcccaggagttcgagaccagcctggacaacatagtgagaccccgtct atqcaaaaatacacaaattaqcctqqtqtqqtqqccqcacctqtqqtcccaqctacccqqqaqqctqaqttqqqa qqatcctttqaqccctqaaaqtcqaqqttqcaqtqaqccttqatcqtqccactqcactccagcctgggggacagagc acqaccctgtctccaaaaataaaataaaataaaataaatattggcgggggaaccctctggaatcaataaaggctt ccttaaccagc

FIGURE 6-C

 ${\rm NM_003259}$ [gi:12545403] Homo sapiens intercellular adhesion molecule 5, telencephalin (ICAM5), mRNA

tcqccaqqqctqcqccqggcgctactcggcctctgggctgctctggggcctggggctcttcggcctctcagcggtctc qcaqqaqcccttctgggcggacctgcagcctcgcgtggcgttcgtggagcgcggggggctcgctgtgggctgaattgca gcaccaactgccctcggccggagcgcggtggcctggagacctcgctgcgccgaaacgggacccagaggggtttgcgt actacaggcgcgtgggctcattcgcactttccagcgaccagatcgcgtagagctgatgccgctgcctccctggcagc cqqtqqqcqaqaacttcaccctgagctgtagggtccccggcgccgggccccgtgcgagcctcacgctgaccctgctg cggggcgcccaggagctgatccgccgcagcttcgccggtgaaccaccccgagcgcgggggcgcggtgctcacagccac qqtactqqctcqqaqqqaqqaccatqqaqccaatttctcqtqttcqcqccqaqctqqacctqcqqccqcacqqactqq qactqtttqaaaacaqctcqgccccaqaqaqctccqaaccttctccctqtctccggatqccccgcqcctcgctgct ggtctacctcgcactgggggaccagaatctgagtcctgatgtcaccctcgaaggggacgcattcgtggccactgcca cagccacagctagcgcagagcaggggtgccaggcagctgatctgcaacgtcaccctgggggggcgaaaaccggggag acccgggagaacgtgaccatctacagcttcccggcaccactcctgaccctgagcgaacccagcgtctccgaggggca qatqqtqacaqtaacctgcqcagctgggacccaagctctggtcacactggagggagttccagccgcggtcccggggc aqcccqcccaqcttcaqctaaatqccaccgagaacgacgacagacgcagcttcttctgcgacgccaccctcgatgtg $\tt gacggggagaccctgatcaagaacaggagcgcagagcttcgtgtcctatacgctccccggctagacgattcggactg$ ccccaqqaqttqqacqtqqcccqaqqqcccaqaqcaqacqctqcqctqcqaqqqcccqcqqqaacccaqaaccctcaq tgcactgtgcgcgctccgacggcggggccgtgctggctctgggcctgctgggtccagtcactcgggcgctctcaggc gctggacagcgtgggctgcccagaacgcattacttggctggagggaacagaagcctcgctgagctgtgtggcgcacg $\tt gggtaccgcctgatgtgatctgcgttctggagaactcggggccgtcatcgaggggctgttgcgtgtgccc$ $\verb|cgggagcattgcgggcacttaccgctgcgaagccaccaaccctcggggctctgcggccaaaaatgtggccgtcacggt|$ qqaatatqqccccaqqtttqaqqaqccqaqctgccccaqcaattggacatgggtggaaggatctgggcgcctgtttt cctqtqaqqtcqatqqqaaqccacaqccaaqcqtqaaqtqcgtgggctccggggggcgccactgagggggtgctgctg ccqctqqcaccccaqaccctaqtcccaqaqctcccaqaatccctaqaqtcctqqcacccqqtatctacqtctqcaa $\verb|cctgcccaaqtcaccagacgtggctggaagggctgaggcttccgcgctggcctgcgcccgggggtcgcccttcc| \\$ ccaggagtgcgctgctctcqqqaaqqcatcccatqqcctqaqcaqcagcqcgtgtcccgagaggacgcgggcactta ccactgtqtqqccaccaatqcqcatqqcacggactcccggaccgtcactgtqgqcgtqgaataccggccagtqgtqg $\verb|cctccagcccagatcagctggcgcgcccccgggggccctcaacatcggcctgtcgagcaacaacagcacctgag|$ qcqqqgqccqqcctgqccttctacgtgcagtccaccgcctgcaagaagggcgagtacaacgtgcaggaggccgagag ttatttatqtattcaactccaagggcgtcacccccattttctacccatcccctcaataaagtttttataaagga

 NM_003259 [gi:12545403] Homo sapiens mitogen-activated protein kinase 10 (MAPK10), transcript variant 1, mRNA.

gagaaatggcgtggcaggggacccagcgagcccagagggattttgccgctgcttcctctacccctgtatttcacgca gctctctaaattgactcagctccaggctagtgtgagaaacaccaacagcaggcccatctcagatcttcactatggca acttatqcaaqaaactqttqaattaqacccgtttcctatagatgagaaaccatacaagctgtggtatttatgagcct $\verb|ccatttcttatactactgcagtgaaccaacattggatgtgaaaattgccttttgtcagggattcgataaacaagtqq|\\$ atgtqtcatatattqccaaacattacaacatgagcaaaagcaaagttgacaaccagttctacagtgtggaagtggga qactcaaccttcacaqttctcaagcgctaccagaatctaaagcctattggctctggggctcagggcatagtttgtgc $\verb|cgcgtatgatgctgtccttgacagaaatgtggccattaagaagctcagcagaccctttcagaaccaaacacatgcca|\\$ agagagcgtaccgggagctggtcctcatgaagtgtgtgaaccataaaaacattattagtttattaaatgtcttcacatcagatggaattagaccatgagcgaatgtcttacctgctgtaccaaatgttgtgtggcattaagcacctccattctg ctggaattattcacagggatttaaaaccaagtaacattgtagtcaagtctgattgcacattgaaaatcctggacttt $\tt ggactggccaggacagcacaagcttcatgatgactccatatgtggtgacacgttattacagagcccctgaggt$ catcctggggatgggctacaaggagaacgtggatatatggtctgtgggatgcattatgggagaaatggttcgccaca aaatcctctttccaggaagggactatattgaccagtggaataaggtaattgaacaactaggaacaccatgtccagaa ttcatgaagaaattgcaacccacagtaagaaactatgtggagaatcggcccaagtatgcgggactcaccttccccaa caaaqatqctaqtqattgacccagcaaaaagaatatcagtggacgacgccttacagcatccctacatcaacgtctgg tatgacccagccgaagtggaggcccccacctcagatatatgacaagcagttggatgaaagagaacacacaattga agaatggaaagaacttatctacaaggaagtaatgaattcagaagaaaagactaaaaatggtgtagtaaaaggacagc ccatgtccaccgaccagaccctggcatctgacactgacagcagcctggaagcctcggcaggacccctgggttgttqc ctttcagcctgcttcttccccagggttctgtattgcagctaagctcaaatgtatatttaacttctagttgctcttgc tttggtcttcttccaatgatgcttactacagaaagcaaatcagacacaattagagaagccttttccataaagtgtaa ttttaatggctgcaaaaccggcaacctgtaactgcccttttaaatggcatgacaaggtgtgcagtggccccatccag tgtattcatacagcactacttacttagagatgctactgtcagtgtcctcagggctctaccaagacataatgcactgg ggtaccacatggtccatttcatgtgatctattactctgacataaacccatctgtaatatattgccagtatataaqct ctctcagacccttgaagatgtagcttccaaatttgaatggattaaatggcacctgtatacca

Other isoforms are isoform 2 (NM_138982); isoform 3 (NM_138980); isoform 4 (NM_138981)

FIGURE 8-A

NM_015078: KIAA0861

 $\verb|tttcagtgaaatgctgtcttgcttaaaagaagatgcctccccaggagctcacccggcgactggccacagtgatcactc| \\$ atgtcgatgaaattatgcagcaggaagtcagacccctgatggcggtggagataatagaacaacttcacagacaatttgcc attctttcaggaggccgagggggggggcccccatcatcacgttcccagagttttcggggttcaaacacatcccaga tgaagacttcctgaatgtcatgacctacctgactagcatccccagtgtggaggctgccagcattggattcattgttgtta tcgacagacgaagagacaagtggagctccgtaaaggcatccttgacacgaatagctgtggcatttccaggaaacttacag $\verb|ctcatattcatccttcgtccatctcgctttatccagaggacattcactgacattggcattaaatactatcgaaatgagtt|\\$ taaaacgaaagtgccgatcatcatggtaaactctgtctctgaccttcacggctacatcgaccaaactgacccgggaattaqqqqqqactttqqaatatcqccacqqtcaqtqqqtaaatcaccqcactqccatcqaaaactttqccttqaccttq a agac cactgcccagatgctgcagacgtttgggtcctgcctggccacagcagagctgcccagaagcatgctatccacggaatggaaaggttattagttcaactggatgaaacagaaaaagcctttagtcacttttggtctgagcatcatctgaagcttaa $\verb|ccagtgcctacaactacagcattttgagcacgatttttgtaaggctaagcttgccctggataatttgctggaagagcaag|$ $\verb|caggagccctggaaaaggcccagctgctggcactggttggggaccagctcatccaaagccaccattatgcagcagatgc|\\$ $\verb|catcaggccccggtgtgtgtggagctcaggcacctctgtgacgatttcatcaatggaaacaagaaaaatgggacattttag|$ gaaagtccttagagtttcatagacagctggacaaggtcagccaatggtgtgaggcaggaatctacctcttggcttcccaagctgtagacaagtgccagtctcgagaaggggttgatatcgccttgaacgacattgcgacattcctgggcacagtcaagga gtacccgttgctcagccccaaggagttttacaacgagtttgagttgctgctcaccctcgatgcaaaggccaaagcccaga aagttttgcagaggctggatgatgtccaggaaatatttcacaagaggcaagtgagtctgatgaaactggcagccaaacag ctcggtccctctagctcgtcctctgagaacgtctgaggaaccttatacggagacagagttgaactcccggggaaaggaag atgatgagactaaatttgaagtcaagagtgaagaaatctttgaaagccatcatgaaagggggaaccctgagctggagcag gattaaaagcataattgatggatatatcactccaatggattttatttggctaaagcatctaattccagatgttcttcaga ataacaaggactttctctttgggaatattagagaactttacgaatttcacaacaggacttttctaaaagagttggaaaag tgtgctgagaaccctgaacttctggcacattgctttctcaagagaaaagaagatcttcagatatattttaaataccataa gaatctgccccgagctagggcaatctggcaagagtgtcaagactgcgcctactttggggtatgccagcgccaactggatc a ca at ctccctcttttta agtatctca aaggacca agc caga gactta ta aaaatacca gatgctgttga agggtctgctggatttcgagtctcctgaagatatggagatagacccaggtgaactaggaggctcggctaaggatgggccaaagagaaccaa agattcagcattctcaactgaactacaacaagctttggcagtgatagaggatttgatcaagtcctgtgagttggctgtgg acctaqcaqcaqtqactqaatqtccqqacqatattqqaaaactaqqcaaqctqttqctqcacqqccctttcaqcqtctqq gggaatagtgttctgtaagatacgaatggagcctggggaccagggattatctcctcattacagcttcaagaagaccatga agctgatgacactttcaattcgccagcttggaagggggagccatagaaagtttgagattgccagtcgaaatggacttgag aaatacatcctgcaggcagcttcaaaagaaatcagagactgttggttttcagaaataagtaaattattgatggaacaaca aaataatatcaaagaccaaggaaatccacagtttgaaatgagcacgagcaaaggcagtggagcaggatccggaccatgga ttaaaaatatggaaagagctaccactagcaaggaagacccggcctccagcacaggagggattaaaggctgctccagcagg gagtttagctccatggacacctttgaagactgtgaaggcgcagaagacatggaaaaggagagcagtgctctgagtctcgc gggccttttccagtcggacgacagtcacgaaacctgttcctccaaatctgctttcctggagagggggagaaagcagccagg ctqqctcctqcqqqqqcqacqqctqqtttccaggcgagggcgctgcgcccgaggacctccgcccaggagagctgacctcc ctgcggacgccccgctcctcggctccagagcgcccgcattcccgggagaggcggtgtgggggcccgggccctgcccagc tacgcagaaagcagccggagcctcggcggcggcagaaaggggacaaccagggcctcctccgaggagcccgaggggtgtcc tgggtgcgcgcctagctccgcacgggggacctcggagctgctctaaggcgcctgcagaggcgagcagagcccgcagccca cgccttctcgaccgcgcacttcgacattcggagccgggcaattctttgctgcgtgggcttctctgtgctcccacggtagg atgtttagtagcacccctggcctctacccactaggtgccaggaatgcgccaccccatcctccaccccgccccaaatcgt gacaatcaaaaatgcctgcagacacgcccgcatttctccagggcggggtgggaatcggttgagagccgcttagcccgagc

FIGURE 8-B

FIGURE 9-A

 NM_006185 [gi:5453819] Homo sapiens nuclear mitotic apparatus protein 1 (NUMA1), mRNA.

qcccacqaaqaggtacqattccggagaatcgcgaggcagagcgggagcgcgcagccaggtggaaactaattctaagccag actgctggagatcaccctgttctagtgtggaggcttccaccaggagtctggagtgcaatggcacgatctcggctcact qcaacctccacctcccaqqttcaaqcqattctcctgcctcagcctcccaagtagctgggattacaggcgcattggagtga ctgtctggcatcaccaagatgacactccacgccacccggggggctgcactcctctcttgggtgaacagtctacacgtggc tgaccctgtggaggctgtgctgcagctccaggactgcagcatcttcatcaagatcattgacagaatccatggcactgaag agggacagcaaatcttgaagcagccggtgtcagagagactggactttgtgtgcagttttctgcagaaaaatcgaaaacat ccctcttccccagaatgcctggtatctgcacagaaggtgctagagggatcagagctggaactggcgaagatgaccatgct gctcttataccactctaccatgagctccaaaagtcccagggactgggaacagtttgaatataaaattcaggctgagttgg ctgtcattcttaaatttgtgctggaccatgaggacgggctaaaccttaatgaggacctagagaacttcctacagaaagct cctgtgccttctacctgttctagcacattccctgaagagctctccccacctagccaccaggccaagagggagattcgctt cctagagctacagaaggttgcctcctcttccagtgggaacaactttctctcaggttctccagcttctcccatgggtgata tcctgcagaccccacagttccagatgagacggctgaagaagcagcttgctgatgagagaagtaatagggatgagctggag ctggagctagctgagaaccgcaagctcctcaccgagaaggatgcacagatagccatgatgcagcagcgcattgaccgcct agccctgctgaatgagaagcaggcggccagcccactggagcccaaggagcttgaggagctgcgtgacaagaatgagagcc ttaccatqcqqctqcatgaaaccctgaagcagtqccaggacctgaagacagagaagagccagatggatcgcaaaatcaac cagctttcggaggagaatggagacctttcctttaagctgcgggagtttgccagtcatctgcagcagctacaggatgccct caatgagctgacggaggagcacagcaaggccactcaggagtggctagagaagcaggcccagctggagaaggagctcagcg cagccctgcaggacaagaaatgccttgaagagaagaacgaaatccttcagggaaaactttcacagctggaagaacacttg qqcaqccactcttqctqcaaacaacacacagctccaagccagggtagagatgctggagactgagcgaggccagcaggaag $\verb|ccaagctgcttgctgagcggggccacttcgaagaagaaaagcagctgtctagcctgatcactgacctgcagagctcc||$ $at \verb|ctccaacctcagccaggccaaggaagagctggagcctcccaggctcatggggcccggttgactgcccaggttggccaggcccaggttggccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggcccaggttggc$ ccaaagagaagcaggcccagctagcacagaccctccaacagcaagaacaggcctcccagggcctccgccaccaggtggag cagctaagcagtagcctgaagcagaaggagcagcagttgaaggaggtagcggagaagcaggaggcaactaggcaggacca tqcccaqcaactgqccactqctqcaqaqqaqcqaqaqqcctccttaaqqqqaqcqqqqatqcqqctctcaaqcaqctqqaqq cactggagaaggagaaggctgccaagctggagattctgcagcagcaacttcaggtggctaatgaagcccgggacagtgcc caqacctcaqtqacacaqqcccaqcqqqaqaaqqcaqaqctqaqccqqaaggtggaqqaactccaggcctgtgttgagac aqcccqccaqqaacaqcatqaqqcccaqqcccaqgttqcaqaqctaqaqttqcaqctqcqgtctqaqcaqcaaaaaqcaa ctgagaaagaaagggtggcccaggagaaggaccagctccaggagcagctccagggccctcaaagagtccttgaaggtcacc aagggcagccttgaagaggagaagcgcagggctgcagatgccctggaagagcagcagcgttgtatctctgagctgaaggc agagacccgaagcctggtggagcagcataagcgggaacgaaaggagctggaagaagagagggctggggcaaggggctgg aggetegattactgeagettggggaggeeeateaggetgagaetgaagteetgeggggggagetggeagaggeeatggetgcccagcacacagctgagagtgagtgtgagcagctcgtcaaagaagtagctgcctggcgtgacgggtatgaggatagcca $\tt gcaagaggaggcacagtatggcgccatgttccaggaacagctgatgactttgaaggaggaatgtgagaaggcccgccagg$ agctgcaggaggcaaaggaggaaggtggcaggcatagaatcccacagcgagctccagataagccggcagcagaacaaacta cctctccactctgcaggaaaagatggctgccaccagcaaagaggtggcccgcttggagaccttggtgcgcaaggcaggtg caacagggacgccagttctgcagcacacaggcagcgctgcaggctatggagcgggaggcagagcagatgggcaatgagct ggctgacccaggagcggggccgtgcccaggctgaccttgccctggagaaggcggccagagcagagcttgagatgcggctg caaggaccaggagttggccaagcttcgtggtctggaggcagcccagataaaagagctggaggaacttcggcaaaccgtga aqcaactqaaqqaacaqctqqctaaqaaaqaaaaggagcacgcatctggctcaggagcccaatctgaggctgctggcagg acagagccaacaggccccaagctggaagcactgcgggcagaggtgagcaagctggaacagcaatgccagaagcagcagga gcaggctgacagcctggaacgcagcctcgaggctgagcgggcctcccggggctgagcgggacagtgctctggagactctgc

FIGURE 9-B

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FIGURE 10A

NP_000192 [gi:4557878] intercellular adhesion molecule I precursor; CD54 [Homo sapiens]

MAPSSPRPALPALLVLLGALFPGPGNAQTSVSPSKVILPRGGSVLVTCSTSCDQPK LLGIETPLPKKELLLPGNNRKVYELSNVQEDSQPMCYSNCPDGQSTAKTFLTVY WTPERVELAPLPSWQPVGKNLTLRCQVEGGAPRANLTVVLLRGEKELKREPAV GEPAEVTTTVLVRRDHHGANFSCRTELDLRPQGLELFENTSAPYQLQTFVLPATP PQLVSPRVLEVDTQGTVVCSLDGLFPVSEAQVHLALGDQRLNPTVTYGNDSFSA KASVSVTAEDEGTQRLTCAVILGNQSQETLQTVTIYSFPAPNVILTKPEVSEGTEV TVKCEAHPRAKVTLNGVPAQPLGPRAQLLLKATPEDNGRSFSCSATLEVAGQLI HKNQTRELRVLYGPRLDERDCPGNWTWPENSQQTPMCQAWGNPLPELKCLKD GTFPLPIGESVTVTRDLEGTYLCRARSTQGEVTREVTVNVLSPRYEIVIITVVAAA VIMGTAGLSTYLYNRQRKIKKYRLQQAQKGTPMKPNTQATPP

FIGURE 10B

NP_001535 [gi:4504561] intercellular adhesion molecule 4 isoform 1 precursor; Landsteiner-Wiener blood group protein [Homo sapiens].

MGSLFPLSLLFFLAAAYPGVGSALGRRTKRAQSPKGSPLAPSGTSVPFWVRMSPE FVAVQPGKSVQLNCSNSCPQPQNSSLRTPLRQGKTLRGPGWVSYQLLDVRAWSS LAHCLVTCAGKTRWATSRITAYKPPHSVILEPPVLKGRKYTLRCHVTQVFPVGY LVVTLRHGSRVIYSESLERFTGLDLANVTLTYEFAAGPRDFWQPVICHARLNLDG LVVRNSSAPITLMLAWSPAPTALASGSIAALVGILLTVGAAYLCKCLAMKSQA

FIGURE 10C

 NP_003250 [gi:12545404] intercellular adhesion molecule 5 precursor; telencephalin [Homo sapiens].

MPGPSPGLRRALLGLWAALGLGLFGLSAVSQEPFWADLQPRVAFVERGGSLWL NCSTNCPRPERGGLETSLRRNGTQRGLRWLARQLVDIREPETQPVCFFRCARRTL QARGLIRTFQRPDRVELMPLPPWQPVGENFTLSCRVPGAGPRASLTLTLLRGAQE LIRRSFAGEPPRARGAVLTATVLARREDHGANFSCRAELDLRPHGLGLFENSSAP RELRTFSLSPDAPRLAAPRLLEVGSERPVSCTLDGLFPASEARVYLALGDONLSPD VTLEGDAFVATATASAEQEGARQLICNVTLGGENRETRENVTIYSFPAPLLTL SEPSVSEGOMVTVTCAAGTQALVTLEGVPAAVPGQPAQLQLNATENDDRRSFFC DATLDVDGETLIKNRSAELRVLYAPRLDDSDCPRSWTWPEGPEQTLRCEARGNP EPSVHCARSDGGAVLALGLLGPVTRALSGTYRCKAANDQGEAVKDVTLTVEYA PALDSVGCPERITWLEGTEASLSCVAHGVPPPDVICVRSGELGAVIEGLLRVARE HAGTYRCEATNPRGSAAKNVAVTVEYGPRFEEPSCPSNWTWVEGSGRLFSCEV DGKPQPSVKCVGSGGATEGVLLPLAPPDPSPRAPRIPRVLAPGIYVCNATNRHGS VAKTVVVSAESPPEMDESTCPSHQTWLEGAEASALACAARGRPSPGVRCSREGIP WPEQQRVSREDAGTYHCVATNAHGTDSRTVTVGVEYRPVVAELAASPPGGVRP GGNFTLTCRAEA WPPAQIS WRAPPGALNIGLSSNNSTLSVAGAMGSHGGEYECA RTNAHGRHARRITVRVAGPWLWVAVGGAAGGAALLAAGAGLAFYVQSTACKK GEYNVQEAESSGEAVCLNGAGGGAGGAAGAEGGPEAAGGAAESPAEGEVFAIQ LTSA

NP_002744 [gi:4506081] mitogen-activated protein kinase 10 isoform 1; JNK3 alpha protein kinase; stress activated protein kinase beta; MAP kinase; c-Jun kinase 3; c-Jun N-terminal kinase 3; stress activated protein kinase JNK3 [Homo sapiens].

MSLHFLYYCSEPTLDVKIAFCQGFDKQVDVSYIAKHYNMSKSKVDNQFYSVEVG DSTFTVLKRYQNLKPIGSGAQGIVCAAYDAVLDRNVAIKKLSRPFQNQTHAKRA YRELVLMKCVNHKNIISLLNVFTPQKTLEEFQDVYLVMELMDANLCQVIQMELD HERMSYLLYQMLCGIKHLHSAGIIHRDLKPSNIVVKSDCTLKILDFGLARTAGTSF MMTPYVVTRYYRAPEVILGMGYKENVDIWSVGCIMGEMVRHKILFPGRDYIDQ WNKVIEQLGTPCPEFMKKLQPTVRNYVENRPKYAGLTFPKLFPDSLFPADSEHN KLKASQARDLLSKMLVIDPAKRISVDDALQHPYINVWYDPAEVEAPPPQIYDKQ LDEREHTIEEWKELIYKEVMNSEEKTKNGVVKGQPSPSAQVQQ

Additional isoforms are isoform 2 (NP_620448); isoform 3 (NP_620446); isoform 4 (NP_620447)

NP_055893: KIAA0861

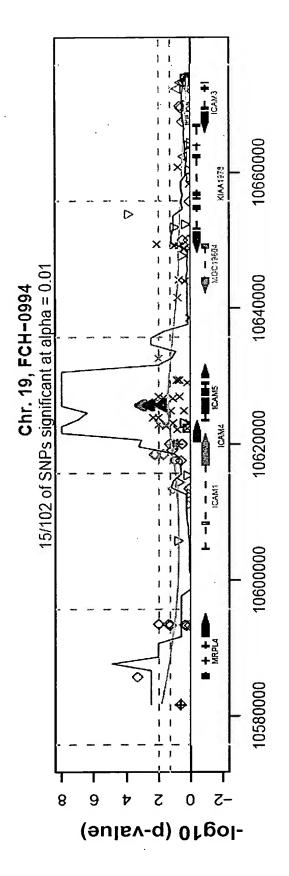
MLSCLKEEMPPQELTRRLATVITHVDEIMQQEVRPLMAVEIIEQLHRQFAILSGGR GEDGAPIITFPEFSGFKHIPDEDFLNVMTYLTSIPSVEAASIGFIVVIDRRRDKWSSV KASLTRIAVAFPGNLQLIFILRPSRFIQRTFTDIGIKYYRNEFKTKVPIIMVNSVSDL HGYIDKSOLTRELGGTLEYRHGQWVNHRTAIENFALTLKTTAQMLQTFGSCLAT AELPRSMLSTEDLLMSHTRQRDKLQDELKLLGKQGTTLLSCIQEPATKCPNSKLN LNOLENVTTMERLLVOLDETEKAFSHFWSEHHLKLNQCLQLQHFEHDFCKAKL ALDNLLEEOAEFTGIGDSVMHVEOILKEHKKLEEKSQEPLEKAQLLALVGDQLIQ SHHYAADAIRPRCVELRHLCDDFINGNKKKWDILGKSLEFHRQLDKVSQWCEAG IYLLASQAVDKCQSREGVDIALNDIATFLGTVKEYPLLSPKEFYNEFELLLTLDAK AKAQKVLQRLDDVQEIFHKRQVSLMKLAAKQTRPVQPVAPHPESSPKWVSSKTS **OPSTSVPLARPLRTSEEPYTETELNSRGKEDDETKFEVKSEEIFESHHERGNPELEQ QARLGDLSPRRRIIRDLLETEEIYIKEIKSIIDGYITPMDFIWLKHLIPDVLQNNKDF** LFGNIRELYEFHNRTFLKELEKCAENPELLAHCFLKRKEDLQIYFKYHKNLPRAR AIWOECODCAYFGVCQRQLDHNLPLFKYLKGPSQRLIKYQMLLKGLLDFESPED MEIDPGELGGSAKDGPKRTKDSAFSTELQQALAVIEDLIKSCELAVDLAAVTECP DDIGKLGKLLLHGPFSVWTIHKDRYKMKDLIRFKPSQRQIYLFERGIVFCKIRMEP GDOGLSPHYSFKKTMKLMTLSIRQLGRGSHRKFEIASRNGLEKYILQAASKEIRD CWFSEISKLLMEQQNNIKDQGNPQFEMSTSKGSGAGSGPWIKNMERATTSKEDP ASSTGGIKGCSSREFSSMDTFEDCEGAEDMEKESSALSLAGLFQSDDSHETCSSKS AFLERGESSOGEKEERDEETATRSTEEERAGASTGRLAPAGATAGFQARALRPR **TSAQES**

NP_006176 [gi: 5453820] nuclear mitotic apparatus protein 1 [Homo sapiens].

MTLHATRGAALLSWVNSLHVADPVEAVLQLQDCSIFIKIIDRIHGTEEGQQILKQP VSERLDFVCSFLQKNRKHPSSPECLVSAQKVLEGSELELAKMTMLLLYHSTMSS KSPRDWEQFEYKIQAELAVILKFVLDHEDGLNLNEDLENFLQKAPVPSTCSSTFP EELSPPSHOAKREIRFLELOKVASSSSGNNFLSGSPASPMGDILQTPQFQMRRLKK OLADERSNRDELELELAENRKLLTEKDAQIAMMQQRIDRLALLNEKQAASPLEP KELEELRDKNESLTMRLHETLKQCQDLKTEKSQMDRKINQLSEENGDLSFKLRE FASHLOOLODALNELTEEHSKATQEWLEKQAQLEKELSAALQDKKCLEEKNEIL **QGKLSQLEEHLSQLQDNPPQEKGEVLGDVLQLETLKQEAATLAANNTQLOARV** EMLETERGOOEAKLLAERGHFEEEK QQLSSLITDLQSSISNLSQAKEELEQASQA HGARLTAQVASLTSELTTLNATIQQQDQELAGLKQQAKEKQAQLAQTLQQQEQ ASOGLRHOVEOLSSSLKOKEQOLKEVAEKQEATRQDHAQQLATAAEEREASLR ERDAALKQLEALEKEKAAKLEILQQQLQVANEARDSAQTSVTQAQREKAELSRK VEELQACVETARQEQHEAQAQVAELELQLRSEQQKATEKERVAQEKDQLOEOL OALKESLKVTKGSLEEEKRRAADALEEQORCISELKAETRSLVEQHKRERKELEE ERAGRKGLEARLLQLGEAHQAETEVLRRELAEAMAAQHTAESECEQLVKEVAA WRDGYEDSQQEEAQYGAMFQEQLMTLKEECEKARQELQEAKEKVAGIESHSEL QISRQQNKLAELHANLARALQQVQEKEVRAQKLADDLSTLQEKMAATSKEVAR LETLVRKAGEOOETASRELVKEPARAGDROPEWLEEQQGRQFCSTQAALQAME REAEOMGNELERLRAALMESQGQQEERGQQEREVARLTQERGRAQADLALEK AARAELEMRLQNALNEQRVEFATLQEALAHALTEKEGKDQELAKLRGLEAAQI KELEELRQTVKQLKEQLAKKEKEHASGSGAQSEAAGRTEPTGPKLEALRAEVSK LEQQCQKQQEQADSLERSLEAERASRAERDSALETLQGQLEEKAQELGHSQSAL ASAORELAAFRTKVODHSKAEDEWKAQVARGRQEAERKNSLISSLEEEVSILNR OVLEKEGESKELKRLVMAESEKSOKLEESCACCRQRQPATVPELQNAALLCGRR CRASGREAEKQRVASENLRQELTSQAERAEELGQELKAWQEKFFQKEQALSTLQ LEHTSTQALVSELLPAKHLCQQLQAEQAAAEKRHREELEQSKQAAGGLRAELLR AORELGELIPLROKVAEQERTAQQLRAEKASYAEQLSMLKKAHGLLAEENRGLG **ERANLGROFLEVELDOAREKYVOELAAVRADAETRLAEVQREAQSTARELEVM** TAKYEGAKVKVLEERQRFQEERQKLTAQVEELSKKLADSDQASKVQQQKLKAV OAOGGESOOEAORFOAOLNELQAQLSQKEQAAEHYKLQMEKAKTHYDAKKQQ NQELQEQLRSLEQLQKENKELRAEAERLGHELQQAGLKTKEAEQTCRHLTAQV RSLEAOVAHADQQLRDLGKFQVATDALKSREPQAKPQLDLSIDSLDLSCEEGTPL SITSKLPRTQPDGTSVPGEPASPISQRLPPKVESLESLYFTPIPARSQAPLESSLDSLG DVFLDSGRKTRSARRRTTQIINITMTKKLDVEEPDSANSSFYSTRSAPASQASLRA TSSTOSLARLGSPDYGNSALLSLPGYRPTTRSSARRSQAGVSSGAPPGRNSFYMG TCQDEPEQLDDWNRIAELQQRNRVCPPHLKTCYPLESRPSLSLGTITDEEMKTGD POETLRRASMOPIOIAEGTGITTRQQRKRVSLEPHQGPGTPESKKATSCFPRPMTP RDRHEGRKOSTTEAQKKAAPASTKQADRRQSMAFSILNTPKKLGNSLLRRGASK KALSKASPNTRSGTRRSPRIATTTASAATAAAIGATPRAKGKAKH

FIGURE 14

ICAM1, ICAM4 and ICAM5 Region



Chromosome position

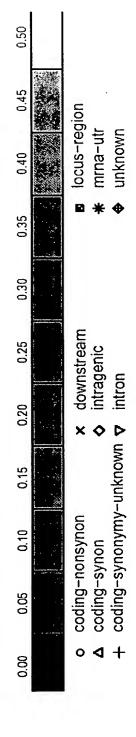
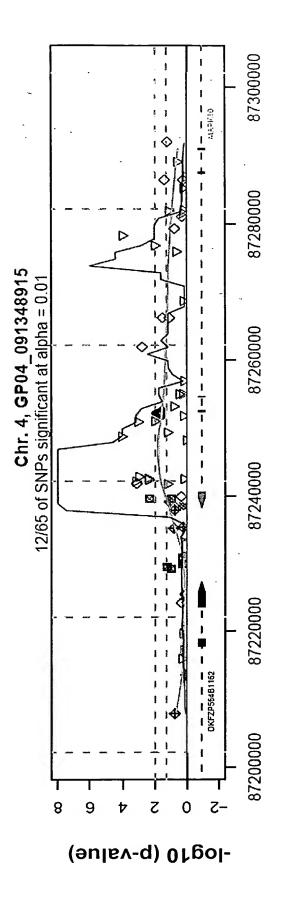


FIGURE 15

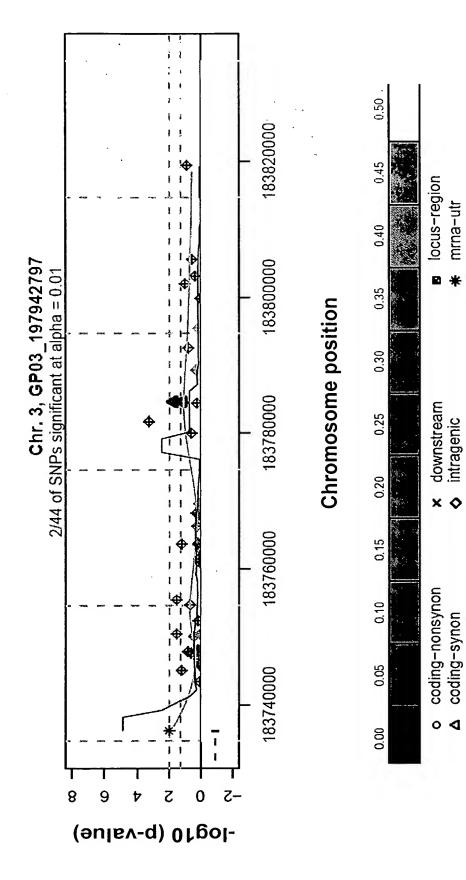
MAPK10



Chromosome position



KIAA0861



mrna-utr unknown

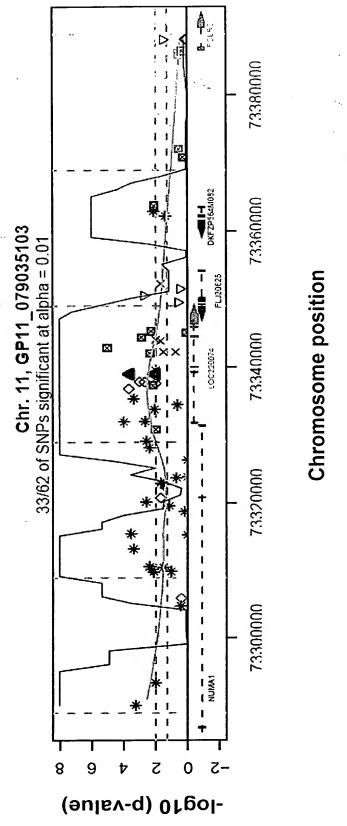
coding-synonymy-unknown ∇ intron

coding-synon

4 +

FIGURE 17

NUMA1/FLJ20625/LOC220074 region



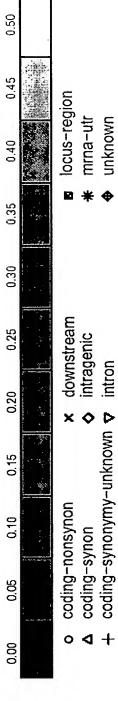


FIGURE 18

ICAM region Meta Analysis

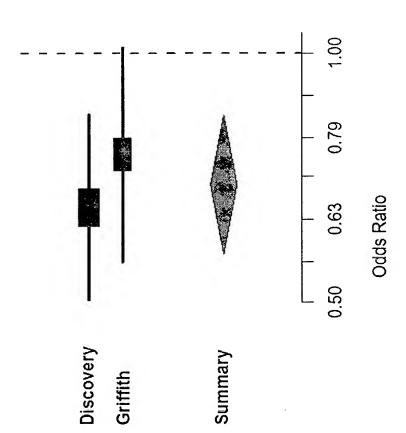


FIGURE 19

MAPK10 Meta Analysis

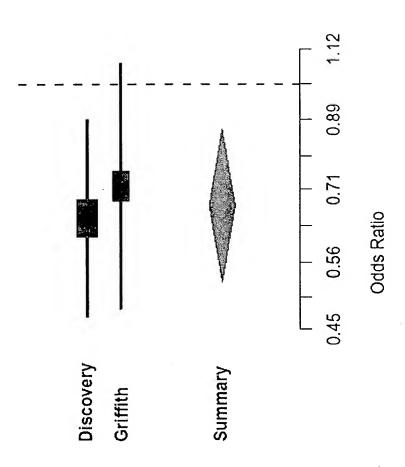


FIGURE 20

KIAA0861 Meta Analysis

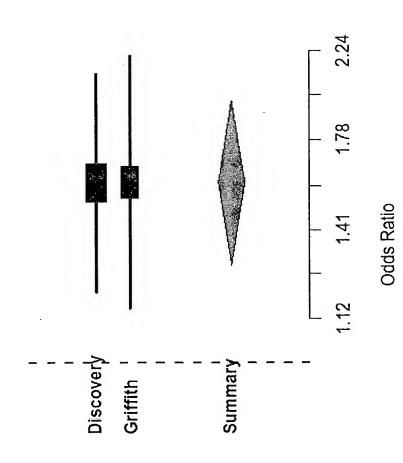
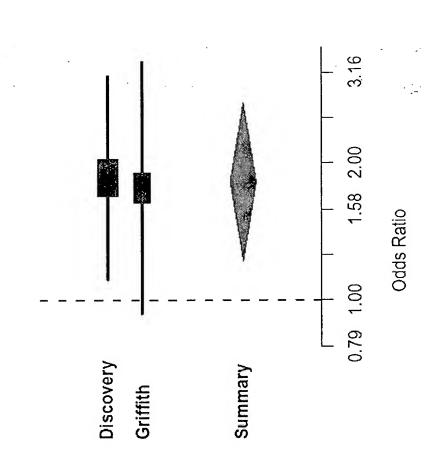
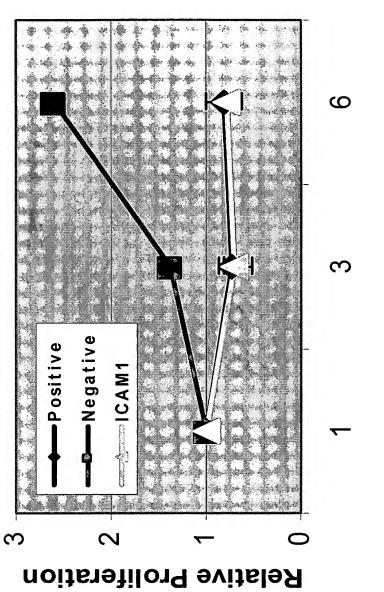


FIGURE 21

NUMA1/LOC220074/FLJ20625 Meta Analysis



ICAM1 in MCF7 cells



Day Post Transfection